California Department of Mental Health

REHOSPITALIZATION SPECIAL STUDY

FISCAL YEAR 1993/94—1999/2000

Department of Mental Health
State Quality Improvement Council
Inpatient Treatment Review Work Group

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Abstract

Rehospitalization rates for county mental health Medi-Cal beneficiaries were studied for Fiscal Years 1993/94 through 1999/00. Data included, but was not limited to, rehospitalization rates at 30 and 180 days, Outpatient contact after Inpatient discharge, admissions by length of stay, and number of admissions in a Fiscal Year. The data was arrayed by age group and race/ethnicity and reviewed at the Statewide, Regional, and County levels. Ten County Mental Health Departments analyzed county and regional data and provided input into the analysis of the data during structured interviews. This study found an increase in rehospitalization rates at 30 days post-discharge of 3.9% over the seven-year period. Rehospitalizations within 180 days of discharge increased 6.6%. County staff attribute these increases to client's increased substance abuse, medication issues, availability of treatment alternatives in the community, lack of low cost housing for clients, and limited numbers of psychiatrists and mental health staff to provide care. Quality improvement opportunities exist for youth, persons who are African American, and clients with high numbers of admissions within a twelve-month period. Counties identified several promising practices in managing Inpatient utilization. Recommendations for follow-up study were made.

Acknowledgements

The Inpatient Treatment Review Workgroup gratefully acknowledges the contributions of many hardworking individuals who have been of inestimable assistance during the course of this special study. Special thanks are due to the mental health directors and staff in the counties who agreed to participate on the Quality Improvement Council's Inpatient Work Group and the staff from the ten target counties who reviewed the extensive data and participated in the county phone interviews.

The Department of Mental Health, Statistics and Data Analysis Unit deserves recognition for unflagging, uncomplaining, and expert statistical data support. Dr. Nancy Callahan and her staff at I.D.E.A. Consulting deserve recognition as both valued partners and skilled professionals.

INTRODUCTION

In 1995, the Department of Mental Health (DMH) converted its Medi-Cal specialty mental health services to managed care under a Federal 1915(b) waiver. This authorized the Consolidation of Fee-for-Service/Medi-Cal (FFS/MC) and Short-Doyle/Medi-Cal (SD/MC) under the administration of a local county acting as a Mental Health Plan (MHP). In Phase I of the Consolidation, January 1995, MHPs entered into contracts with FFS and Short-Doyle hospitals. MHPs became the point of authorization for all Inpatient Services and provided oversight to assure access, quality and cost-effectiveness. Phase II Consolidation moved the responsibility for all Outpatient specialty mental health services to MHPs. Phase II implementation dates varied but all counties consolidated Outpatient services by July 1998.

The Federal government requires an Independent Assessment of a waiver program as one condition of its periodic renewal of the waiver authority. In August 1999, I.D.E.A. Consulting completed an evaluation of the waiver program entitled "Assuring Access, Quality and Cost Effectiveness." The Independent Assessment noted the following:

> *"Across all clients seen in Inpatient Services between July and December 1993, there were a total of 15,924 clients. Of these clients, 10,694 did not return and 5,230 returned within six months. That calculates into a 33% return rate. In July – December 1997, there were 12,756 clients in Inpatient Services. Of these clients, 6,870 did not return and 5,886 returned. This calculates into a 46% rate of returning to Inpatient Services within six months…The State and counties may want to look more closely at this increase in recidivism." (Page I-40)*

In February 2000, the State Quality Improvement Council (QIC) initiated a quality improvement study on rehospitalization and rates of rehospitalization. A State QIC Inpatient Treatment Review Work Group was established to accomplish this task. A current roster of Work Group members and the Work Group's Mission Statement are attached.

In a March 2001 Report to the Legislature, the State QIC included the Rehospitalization Special Study as a formal activity within its performance measurement framework. As noted in that report, the objectives of the Special Study are to:

1. Analyze rehospitalization data
2. Investigate potential factors related to increased rehospitalization
3. Identify opportunities to improve care
4. Re-evaluate success and redirect efforts

This report summarizes the work and preliminary conclusions of the Inpatient Treatment Review Work Group on the Rehospitalization Special Study.

Background Research on Rehospitalization

There has been extensive research to determine if rehospitalization[1] can be used as a measure of quality of care; however, a consistent link between readmissions and quality has not been established (Pollack, 2001; Benbasset & Taragin, 2000; Weissman, Ayanian, Chasan-Taber, Sherwood, Roth, & Epstein, 1999; Lyons, O'Mahonney, Miller, Neme, Kabat, & Miller, 1997). Unfortunately, there are too many methodological problems between studies of this issue to compare results and reach firm conclusions. There has been little attention given to an optimal rate of rehospitalization or what constitutes preventable rehospitalization.

There has been considerable study of potential predictors of rehospitalization. In general, this work has been wide-ranging and has identified multiple variables of interest, some of which are inconsistent across studies (Averill, Hopko, Small, Greenlee, & Varner, 2001). An abbreviated list of some of the findings of the more current literature, organized by date of publication, gives a flavor of how broadly researchers are approaching this complex topic:

- Patients who did not have an Outpatient appointment after discharge were two times more likely to be hospitalized in the same year as patients who kept at least one Outpatient appointment. (Nelson, Maruish, & Axler, 2000).

- Population density may be a factor in rehospitalization rates for the seriously and persistently mentally ill population. The most effective clinical practices designed to reduce rehospitalization may vary with the type of community – rural versus urban – in which those practices take place, and a therapy or procedure that is quite effective in one location may have quite different results in another. (Husted & Jorgens, 2000).

- Rehospitalization rates of patients taking the second-generation antipsychotics, including risperidone and clozapine, were lower than those in previously published reports of patients on conventional antipsychotic drugs. (Conley, Love, Kelly, & Bartko, 1999; Rabinowitz, Lictenberg, Kaplan, Mark, Nahon, & Davidson, 2001).

- Rapid readmission (less than three months after discharge) was significantly associated with instability of clinical condition at first discharge (especially mood disorders) and, to a lesser degree, with failure to prescribe specific medication for patients with affective disorders. Regardless of duration of community tenure, readmission

[1] The Inpatient Treatment Review Work Group consciously chose to use the term, "rehospitalization" rather than recidivism. In the members' minds, recidivism has a pejorative connotation that was felt to be inappropriate in this work. The term "readmissions" is also a synonym for rehospitalization.

was strongly associated with medication nonprescription or discontinuation (Craig, Fennig, Tanenberg-Karant, & Bromet, 2000).

- A New York study documented a readmission rate of 24.4% within three months of hospital discharge. Early rehospitalization was associated with the following: four or more previous hospitalizations; co-morbid substance use disorder; major depression; absence of a family meeting with Inpatient staff; and prescription of a conventional rather than an atypical psychotic medication (Olfson, Mechanic, Boyer, Hansell, Walkup, & Weiden, 1999).

- Researchers found a strong association of involuntary legal status at first admission with involuntary status at second admission and with the number of involuntary admissions over time. This suggested that an involuntary first admission might be an important factor in assessing whether patients are likely to be readmitted involuntarily (Fennig, Rabinowitz, & Fennig, 1999).

- A Georgia study found that aftercare services generally did not influence the likelihood of Inpatient readmission. However, when specific forms of aftercare were studied, Outpatient therapy had the largest effect and step-down services in intermediate settings had the smallest (Foster, E.M, 1999).

- Hospitalization utilization was found to be a function of psychiatric diagnosis, marital status and various personality factors. Factors relating to social disadvantage also play a role. Axis I diagnoses, particularly substance use disorders, were as important as, if not more important then, Axis II diagnoses in predicting utilization (Williams, Weiss, Edens, Johnson, & Thornby, 1998).

- A 1997 study determined that case management intervention is unlikely to reduce rehospitalization rates unless appropriate and effective Outpatient and community services are available (D'Ercole, Struening, Curtis, Millman, & Morris, 1997).

- Alcohol/drug problems and noncompliance with medication were the most important factors related to frequency of hospitalization. Preventing these behaviors through patient education may reduce rehospitalization rates (Haywood, Kravitz, Grossman, Cavanaugh, Davis, & Lewis, 1995).

The research is in agreement on one point - the *only consistent predictor* of frequent rehospitalization is a person's history of past psychiatric hospital admissions. Those who have sought or received Inpatient Services in the past tend to repeat this behavior (Montgomery & Kirkpatrick, 2002; Monnelly, 1997).

Despite the complex picture of rehospitalization drawn by the research, rehospitalization rates at 30 and/or 180 days are common measures tracked in both the public and private physical health and mental health sectors. It is an indicator in the Substance Abuse and Mental Health Services Administration (SAMHSA) Sixteen State Indicators and is also a Health Employer Data Information System (HEDIS) standard measure. It is useful to observe trends in this measure over time within a particular service delivery system, across states, and also to identify outlier values that warrant further investigation.

METHOD

Terminology

As a first step, the members of the Inpatient Treatment Review Work Group agreed upon definitions of key terms that would be critical in their work. These included:

Client:	*A person who was admitted to a mental health service provider and received one or more Medi-Cal Mental Health Services during a Fiscal Year.*
Inpatient Admission (Episode):	*One or more continuous days of paid Medi-Cal Inpatient Services for a client (includes Psychiatric Inpatient Hospitals and Psychiatric Health Facilities). This data does not include State Hospital data.*
Rehospitalization:	*A client who received one Medi-Cal Inpatient Service admission in a year and then received a second Medi-Cal Inpatient Service admission within that same Fiscal Year.*

Data Gathering and Analysis

Using the Independent Assessment as a guide, the Work Group, with assistance from DMH Statistics and Data Analysis staff, identified data elements to help construct a picture of rehospitalization rates from Fiscal Year (FY) 1993/94 through FY 1999/00. During the course of the study, the following data was reviewed:

- Total unduplicated clients (by age, race/ethnicity, diagnosis)
- Total unduplicated Inpatient clients (by age, race/ethnicity, diagnosis)
- Total number of Inpatient admissions
- Total number of Inpatient days
- Percent of clients who received Inpatient Services.
- Number of clients rehospitalized (by age, race/ethnicity, diagnosis)
- Lengths of Inpatient stay (by age, race/ethnicity, diagnosis)
- Time to rehospitalization from initial admission (by age, race/ethnicity, diagnosis).
- Time elapsed between Inpatient discharge and first Mental Health Service contact
- Administrative day rate utilization for selected counties
- DMH Medi-Cal County Profile Reports

County Specific Data

After a thorough analysis of Statewide data, the Work Group concluded that county-specific data and interpretation would facilitate an understanding of Statewide trends. The Work Group identified a small number of counties and asked for their assistance with the study. Counties were selected to include representation from most areas of California. The selected counties reflect a range of counties from small to large and rural to urban.

Once the ten selected counties had agreed to participate, DMH staff and consultants produced the data requested from Medi-Cal paid/approved claims files[2]. From these data files, graphic displays of the data were generated. Work Group members received copies of the data and had input into the development of these data models. The following data sets were produced:

- Rates of rehospitalization within 0-30 days after Inpatient discharge by age, race/ethnicity and diagnosis
- Rates of rehospitalization within 0-180 days after Inpatient discharge by age, race/ethnicity and diagnosis
- Mental Health Service contact after Inpatient discharge by age group and by type of service
- Mental Health Service contact after Inpatient discharge by race/ethnicity and by type of service
- Number of clients by number of admissions by age, race/ethnicity and diagnosis
- Admissions by length of stay by age group, race/ethnicity and diagnosis
- Length of stay of admissions not rehospitalized and admissions rehospitalized by age group, race/ethnicity and diagnosis
- Clients, dollars and units by service type by age group, race/ethnicity and diagnosis

While DMH Statistics and Data Analysis staff were generating the data, Work Group members developed a set of interview questions to be used in county interviews. The goal was to obtain a consistent set of information from each of the counties as they discussed their Inpatient Services data. The interview questions are attached.

[2] The Fee-for-Service/Medi-Cal file is a paid claims file, while the Short-Doyle/Medi-Cal file is an approved claims file.

Once the graphs were produced for the ten counties, each county representative received three packets of data: their own county's data, their region's data, and Statewide data. Some counties also received CANOLA[3] (California No Los Angeles) data. Counties had the option of calling Work Group members to discuss the data prior to the scheduled interview for help with understanding the data and how it was calculated.

County staff were contacted and a two-hour block of interview time reserved to discuss their county-specific data. The interviews were conducted April through June of 2002. In every case, participating counties had spent time understanding and working with the data they had been supplied. Usually, several county staff participated on the telephone interviews and shared their insights.

Once the interviews were completed, Work Group members, DMH staff and consultants worked to prepare a draft of the results of the special study. Participating county staff were asked to review the second draft for accuracy and clarity.

Data Sources

Medi-Cal paid/approved claims are the data source for this study. Since claims files for a fiscal year are not considered complete until approximately twelve months after the close of the fiscal year, the most complete year of claims available for use in this study was Fiscal Year (FY) 1999/00.

The Work Group analyzed data from FY 1993/94 through FY 1999/00. FY 1993/94 was the last year in which Medi-Cal mental health clients could receive Inpatient Services without the admission being authorized by the local County Mental Health Plan (MHP). Through reviewing a number of years of data, the Work Group was able to observe rehospitalization trends before, during, and after consolidation. Members reviewed data at the State, CANOLA, region,[4] and county level.

There are some inherent limitations with Medi-Cal claims data for the years analyzed during the course of this study. Medi-Cal data is limited by the race/ethnicity codes used by the Social Security Administration (SSA). The SSA reports data from persons who are in the Aged, Blind and Disabled categories. Until May 2001, the data provided to DMH on individuals receiving Medi-Cal services through these SSA categories was coded using only Caucasian, African American or Other race/ethnicity codes. This has created a very limited picture of the race/ethnicity of

[3] CANOLA means data shown for the State as a whole minus values for Los Angles County. This construct sometimes provides a better picture of the differences between Statewide trends and Los Angeles County trends when these are different.

[4] Region refers to the five CMHDA regions – Superior, Bay Area, Central Valley, Southern California and Los Angeles. Los Angeles County is considered its own Region. The Southern California Region does not include data from Los Angeles.

clients in California. Persons in SSA administered programs represent about 20 percent of persons who are Medi-Cal eligible, but over 50 percent of the mental health clients. Thus, the limited range of codes used by the SSA limits the usefulness of this data. Therefore, caution should be used in drawing conclusions with this limited race/ethnicity data.

Another limitation is the completeness of data for older adult clients. Many clients over the age of 65 obtain services where Medicare is the primary payor. The claims for these services are not captured by Medi-Cal claims data. As a result, services to older adults are probably drastically understated in Medi-Cal data and, for that reason, few conclusions about this age group can be reached.

Client satisfaction is a critical parameter that should be included in a study of this nature. Unfortunately, the Mental Health Statistics Improvement Project (MHSIP) survey began reporting results in the later half of FY 1999/00 - only six months before the end of the data period being examined by the Work Group. Since there were some technical problems still being solved during the first six months of administration, the DMH Performance Outcome staff advised that MHSIP data not be used for this special study.

County Identification

In keeping with the quality improvement goals of this special study, the Work Group decided that individual county data would not be identified by county name. Members felt county identification would lead to cross-county comparisons instead of promoting an overall view of the Medi-Cal mental health system as a whole. In addition, without risk adjustment and corrections for population size and other factors, comparisons between counties can be misleading.

Los Angeles County is the exception to the above rule. The population of Los Angeles County represents 28% of the total population of California. Medi-Cal clients in Los Angeles are 29.8% of all Medi-Cal mental health clients in the State. The sheer size of the county has an enormous impact on any statistical picture that is drawn for the State as a whole because it can obscure trends that reflect the performance of the rest of the counties. There is no other area or county in the State that can serve as a useful comparison or benchmark for Los Angeles. It can best be understood by tracking its performance against itself.

It is also important to note that the shortage of Inpatient psychiatric beds generally facing the rest of the State is not a factor in Los Angeles. This has important consequences for the operations of the public mental health system as a whole in Los Angeles. For all these reasons, Los Angeles County Mental Health consented to the identification of their county data by name.

RESULTS

Two types of information were gathered for this study – quantitative data from Medi-Cal claims files and qualitative data from county mental health staff. Given the sheer volume of data gathered, it is impossible to include it all. The Work Group has chosen to give most emphasis in this report to those data elements that present the most complete picture of rehospitalization and how rehospitalization rates have varied during the study period (i.e., FY 1993/94 through FY 1999/00).

I. Data Review

Statewide data will be described in detail. Each category of data was analyzed by age and race/ethnicity. Some categories of data were also available by diagnosis. Ranges of data from the ten counties will be used to highlight noteworthy differences.

Medi-Cal Mental Health Inpatient Population

Figure 1 shows that the total number of clients using Medi-Cal Inpatient Services has remained virtually the same during the years of this study. In FY 1993/94, there were 29,117 and in FY 1999/00 there were 29,459 Inpatient clients. During this same time period, the total number of Medi-Cal mental health clients has grown from 275,151 to 330,146.

Figure 1
County, CANOLA, and State Population, Unduplicated Medi-Cal Mental Health Clients, Medi-Cal Mental Health Inpatient Clients for FY 1993/94 and 1999/00

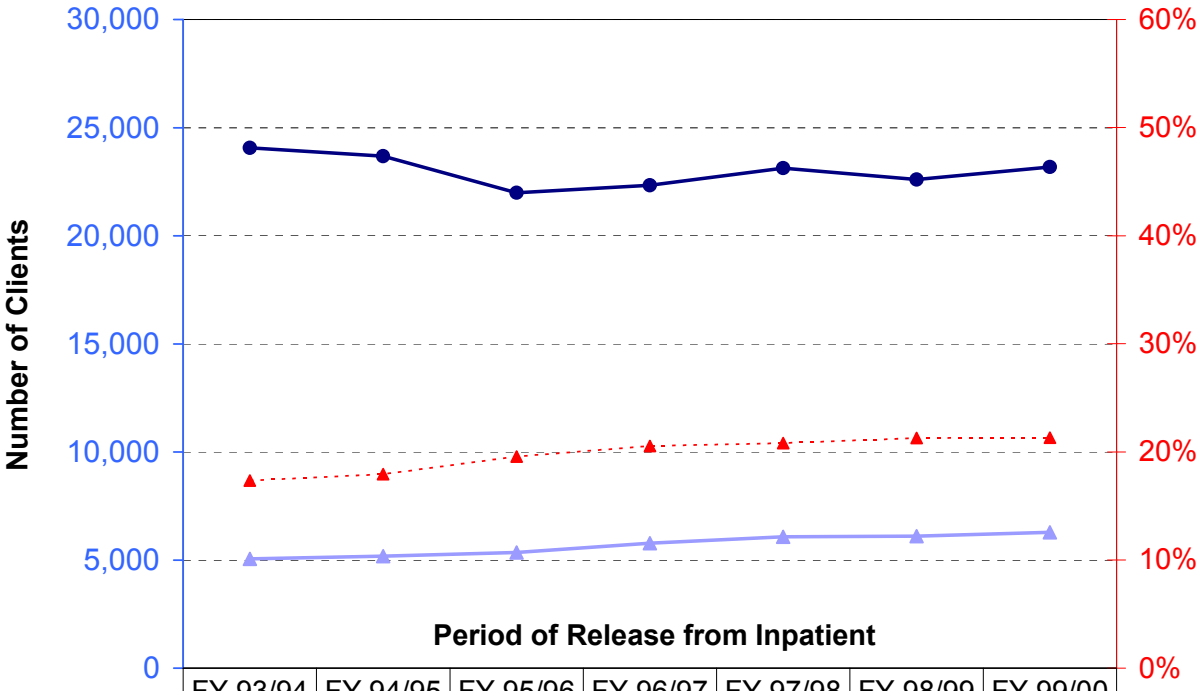
	Total County Population FY 1999/00	Total # of Medi-Cal Mental Health Clients FY 1993/94	Total # of Medi-Cal Mental Health Clients FY 1999/00	Total # of Medi-Cal Mental Health Inpatient Clients FY 1993/94	Total # of Medi-Cal Mental Health Inpatient Clients FY 1999/00
County A	1,443,741	12,679	13,772	1,619	1,771
County B	799,407	8,706	10,265	568	557
County C	126,518	2,210	2,268	238	213
County D	661,645	5,360	11,296	624	523
County E	2,846,289	12,396	16,993	1,409	917
County F	1,545,387	12,473	13,498	1,954	1,581
County G	446,997	4,528	6,319	606	796
County H	139,149	1,631	2,239	125	216
County I	56,039	955	1,222	50	43
Los Angeles	9,519,338	74,031	98,484	8,171	10,567
CANOLA	24,352,310	201,120	231,662	20,946	18,892
Statewide	**33,871,648**	**275,151**	**330,146**	**29,117**	**29,459**

Rehospitalization Rate Trends - 0-30 Days After Inpatient Discharge

The number and percent of clients Statewide that returned to Inpatient Services within 30 days of discharge was examined for FY 1993/94 through FY 1999/00. This data was also examined by age group, race/ethnicity and diagnosis.

Figure 2 show trends for rehospitalization for the State. The Statewide number of persons who returned within 30 days ranged from 5,054 in FY 1993/94 to 6,281 in FY 1999/00. This represents 17.4% to 21.3% of the persons receiving Inpatient Services during this time period.

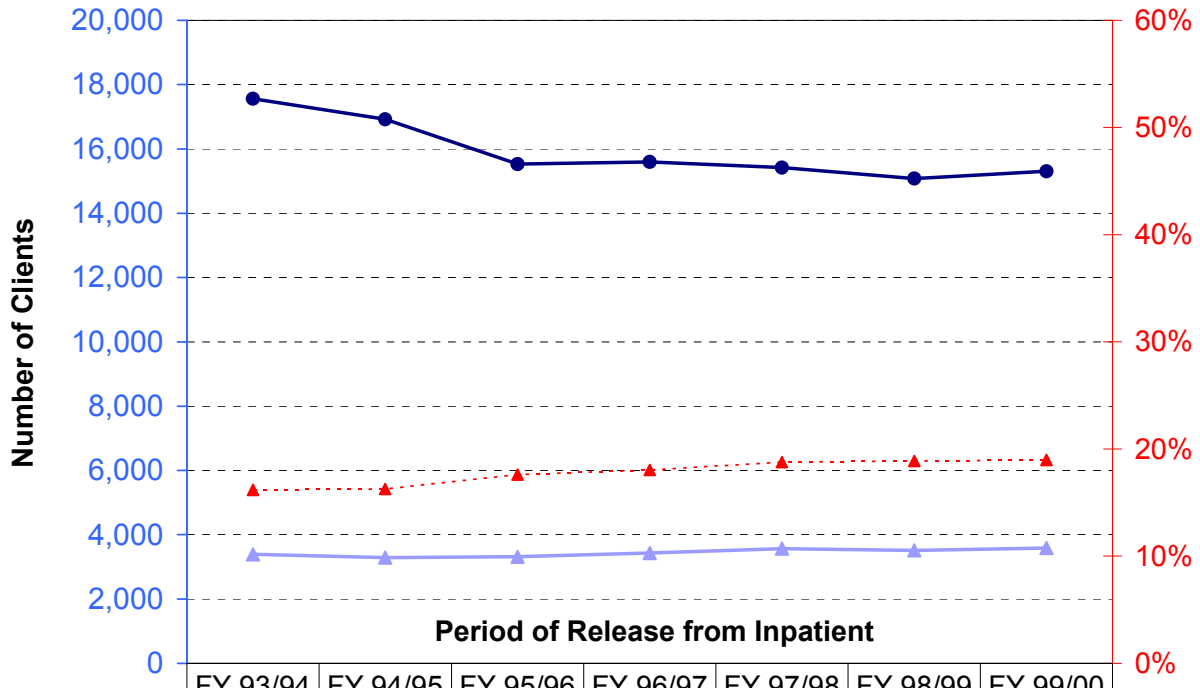
Figure 2
Statewide
Number and Percent of All Medi-Cal Mental Health Inpatient Clients
Who Returned to Inpatient Services Within 30 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	24,063	23,680	21,990	22,338	23,132	22,601	23,178
Returned	5,054	5,180	5,351	5,780	6,080	6,109	6,281
Proportion Returning	17.4%	17.9%	19.6%	20.6%	20.8%	21.3%	21.3%
Total Clients	29,117	28,860	27,341	28,118	29,212	28,710	29,459

Figure 3 shows trends for rehospitalization for CANOLA. The number of persons who returned within 30 days ranged from 3,389 in FY 1993/94 to 3,585 in FY 1999/00. This represents 16.2% to 19.0% of the persons receiving Inpatient Services during this time period.

Figure 3
CANOLA
Number and Percent of All Medi-Cal Mental Health Inpatient Clients Who Returned to Inpatient Services Within 30 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	17,557	16,921	15,526	15,599	15,421	15,081	15,307
Returned	3,389	3,287	3,318	3,434	3,565	3,511	3,585
Proportion Returning	16.2%	16.3%	17.6%	18.0%	18.8%	18.9%	19.0%
Total Clients	20,946	20,208	18,844	19,033	18,986	18,592	18,892

Figure 4 shows the percent of Inpatient clients who returned within 30 days of discharge, by County, CANOLA, and Statewide. As shown below, rehospitalization rates within 0-30 days of discharge rose from 17.4% to 21.3% during the seven years of the study period. The single biggest increase was in FY 1995/96. In that year, the rate rose 1.7%, from 17.9% in FY 1994/95 to 19.6% in FY 1995/96. The CANOLA trend line is somewhat flatter than the Statewide trends. The rate increase in the CANOLA data is even slower. The largest annual change was 1.3% and occurred in FY 1995/96, the same year as in the Statewide data.

Phase I of Consolidation occurred midway through FY 1994/95. Therefore, claims for FY 1995/96 represent the first full year of this system change with the MHPs responsible for the authorization of Inpatient admissions. Given such a significant change in the authorization of services and responsibility for care management, it is not surprising that trends changed during this period.

Figure 4
Percent of Medi-Cal Mental Health Inpatient Clients Who Returned Within 30 Days
By County, CANOLA, and Statewide

	FY 1993/94	FY 1994/95	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99	FY 1999/00
County A	14.6%	17.1%	19.0%	19.8%	21.3%	20.2%	19.2%
County B	17.4%	17.5%	18.7%	17.7%	19.2%	21.4%	18.1%
County C	16.4%	12.3%	14.2%	19.8%	19.8%	16.9%	16.4%
County D	13.3%	14.7%	16.0%	17.9%	17.6%	16.1%	18.9%
County E	17.7%	16.4%	12.5%	13.1%	12.9%	15.7%	16.0%
County F	14.5%	14.3%	17.1%	16.6%	19.8%	20.9%	20.0%
County G	13.5%	16.2%	19.1%	18.3%	17.8%	14.4%	16.5%
County H	13.6%	9.6%	15.8%	17.7%	19.2%	21.4%	17.6%
Count I	12.0%	15.1%	20.8%	12.2%	18.2%	10.0%	4.7%
Los Angeles	20.4%	21.9%	23.9%	25.8%	24.6%	25.7%	25.5%
CANOLA	16.2%	16.3%	17.6%	18.0%	18.8%	18.9%	19.0%
Statewide	**17.4%**	**17.9%**	**19.6%**	**20.6%**	**20.8%**	**21.3%**	**21.3%**

The figures for County I illustrate two important factors. County I is a small, rural Northern California county that had only 43 Inpatient clients in FY 1999/00. A 4.7% return rate means two clients returned within the 0-30 day time period. Rates for small counties with limited populations must be interpreted carefully.

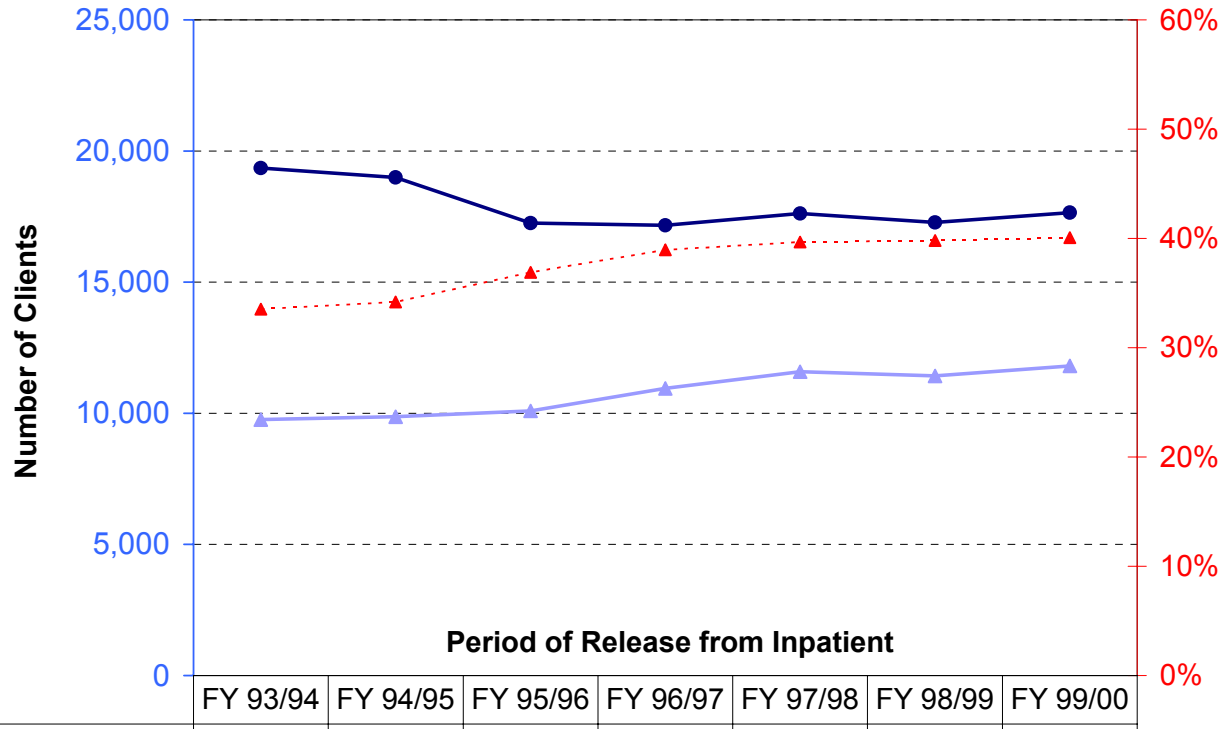
In addition, because of the limited number of psychiatric Inpatient beds available for County I clients, the county may utilize other levels of care for clients. This may include placing clients in Institutions for Mental Diseases (IMDs) or other Inpatient facilities that may not be reimbursable by Medi-Cal. Claims for Medi-Cal clients in such facilities would not be reflected in the data reviewed for this study. Therefore, a distorted picture of a small county's total rehospitalizations might emerge.

Rehospitalization Rate Trends - 0-180 Days After Inpatient Discharge

It was Statewide rehospitalization rates at 180 days that were cited in the Independent Assessment as warranting scrutiny and prompting this quality improvement study. (Refer to quotation in the Introduction Section of this report.)

Figure 5 shows Statewide rehospitalization trends for 0-180 days after Inpatient discharge for FY 1993/94 to FY 1999/00. The Statewide number of persons who returned within 180 days ranged from 9,764 in FY 1993/94 to 11,810 in FY 1999/00. This represents 33.5% to 40.1% of the persons receiving Inpatient Services during this time period.

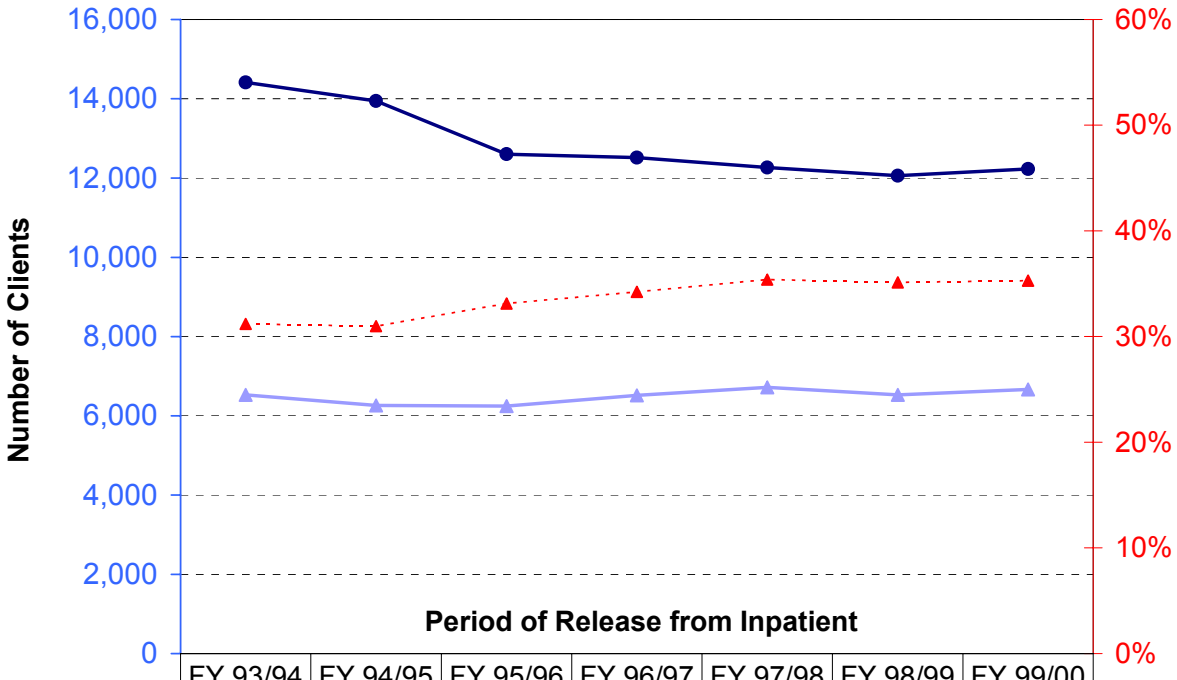
Figure 5
Statewide
Number and Percent of All Medi-Cal Mental Health Inpatient Clients
Who Returned to Inpatient Services Within 180 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	19,353	18,990	17,253	17,165	17,622	17,281	17,649
Returned	9,764	9,870	10,088	10,953	11,590	11,429	11,810
Proportion Returning	33.5%	34.2%	36.9%	39.0%	39.7%	39.8%	40.1%
Total Clients	29,117	28,860	27,341	28,118	29,212	28,710	29,459

Figure 6 shows CANOLA rehospitalization trends for 0-180 days after Inpatient discharge for FY 1993/94 to FY 1999/00. The number of persons who returned within 180 days ranged from 6,532 in FY 1993/94 to 6,666 in FY 1999/00. This represents 31.2% to 35.3% of the persons receiving Inpatient Services during this time period.

Figure 6
CANOLA
Number and Percent of All Medi-Cal Mental Health Inpatient Clients Who Returned to Inpatient Services Within 180 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	14,414	13,946	12,600	12,517	12,267	12,061	12,226
Returned	6,532	6,262	6,244	6,516	6,719	6,531	6,666
Proportion Returning	31.2%	31.0%	33.1%	34.2%	35.4%	35.1%	35.3%
Total Clients	20,946	20,208	18,844	19,033	18,986	18,592	18,892

Generally, rehospitalization rates for both the State and CANOLA at 180 days have shown more variability than those for 0-30 days. The CANOLA curve is the most similar to the 0-30 days trend with an increase of 4.1% over the seven years. The Statewide rate has increased 6.6%.

A summary of County, CANOLA, and Statewide data on the percent of clients returning within 180 days is shown in Figure 7.

Figure 7
Percent of All Medi-Cal Mental Health Inpatient Clients Who Returned Within 180 Days By County, CANOLA, and Statewide

	FY 1993/94	FY 1994/95	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99	FY 1999/00
County A	29.3%	31.4%	37.2%	40.0%	42.4%	41.3%	37.2%
County B	32.6%	31.2%	33.8%	32.8%	37.2%	34.4%	31.1%
County C	30.7%	26.8%	26.7%	34.1%	38.8%	35.2%	29.1%
County D	28.7%	28.2%	31.0%	31.7%	35.0%	31.3%	34.2%
County E	33.1%	29.5%	21.9%	24.5%	25.3%	28.0%	31.1%
County F	28.6%	29.8%	32.6%	32.6%	37.0%	37.9%	38.1%
County G	29.0%	30.8%	34.2%	32.6%	34.5%	26.8%	32.8%
County H	29.6%	23.3%	28.2%	33.3%	31.3%	38.0%	35.2%
County I	28.0%	20.8%	29.2%	22.0%	18.2%	10.0%	9.3%
Los Angeles	39.6%	41.7%	45.2%	48.8%	47.6%	48.4%	48.7%
CANOLA	31.2%	31.0%	33.1%	34.2%	35.4%	35.1%	35.3%
Statewide	**33.5%**	**34.2%**	**36.9%**	**39.0%**	**39.7%**	**39.8%**	**40.1%**

The greater variability in the Statewide data in Figure 7 reflects, in part, the influence of Los Angeles trends as shown in the table above. The Los Angeles system has operated its authorization system differently than the remainder of the State during this time period. There is also greater bed capacity in Los Angeles County and this impacts admission practices.

Interestingly, four of the ten counties actually had a lower rehospitalization rate in FY 1999/00 than in FY 1993/94.

Rehospitalization Rate Trends by Age Group

The Work Group was interested in looking at rehospitalization by age group. In California, the Mental Health Service delivery systems for Youth and for Adults are generally quite different. Viewing data by age provides an opportunity to look for trends that might not otherwise be apparent. The age groups used in this study were Youth (ages 0-17), Adults (ages18-64), and Older Adults (65+). As explained previously, because this is only Medi-Cal data and many Older Adults receive

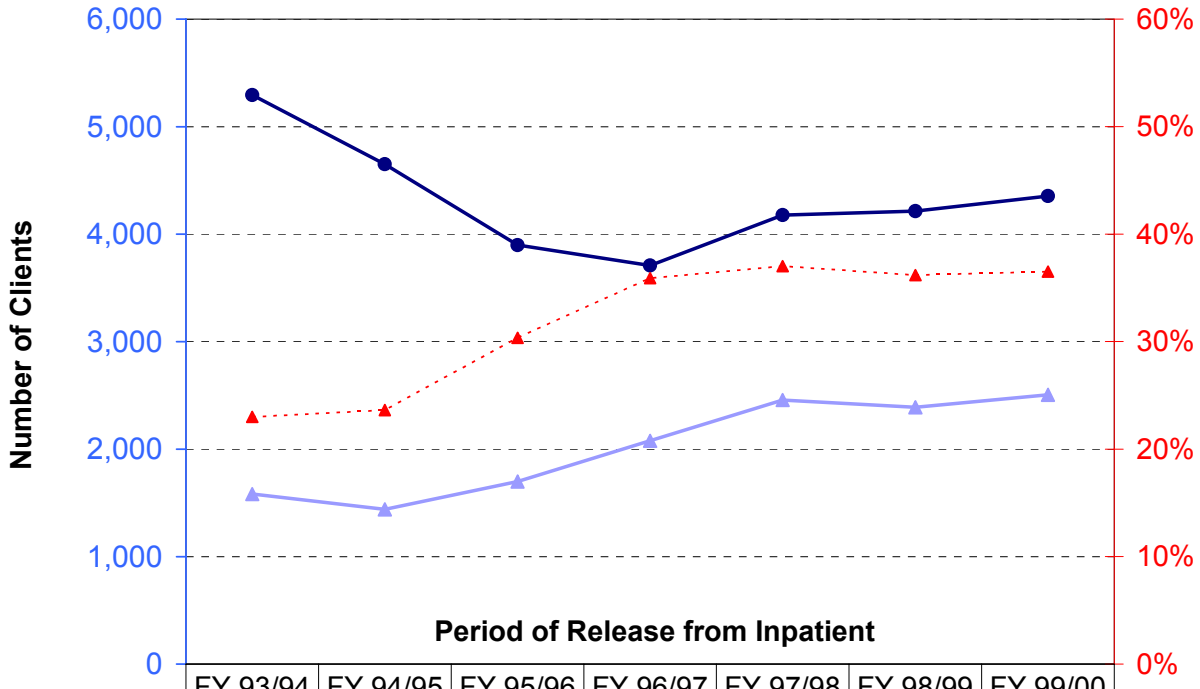
Medicare services, the data are incomplete for the Older Adult population. As a result, no conclusions for the Older Adult age group can be made at this time. In assessing age group rehospitalization trend data, it is helpful to know what proportion of total clients and Inpatient clients were Youth and Adults during the study period. As shown in the California Department of Mental Health Profile Report, Youth represent 32.4% of the total Medi-Cal clients in FY 1993/94, a proportion that grew to 36.5% of clients in FY 1999/00. The percent of Inpatient clients in the Youth category did not change over the seven years of the study data – 23.6%-23.2% of all Inpatient clients.

Adults represent 64.5% of the total Medi-Cal clients in FY 1993/94. This proportion decreased to 60.2% of the total client population by FY 1999/00. The percent of Inpatient clients in the Adult category remained approximately the same over the seven years of the study data ranging from 73.6% to 74.3% of all Inpatient clients.

In the interests of space, the focus of this discussion will be on Youth and Adult rehospitalization rates within 0-180 days. The foregoing discussion of overall rehospitalization trends demonstrates that rates of rehospitalization within 180 days are more variable and may be more informative. Using State and CANOLA data, Figures 8-10 show the rehospitalization trends for Youth and Figures 11–13 show trends for Adults at 0-180 days.

Figure 8 shows the number and percent of Youth Statewide who returned to Inpatient Services within 180 days. In FY 1993/94, 23% of the Youth returned to Inpatient, while in 1999/00 there were 36.5% returning.

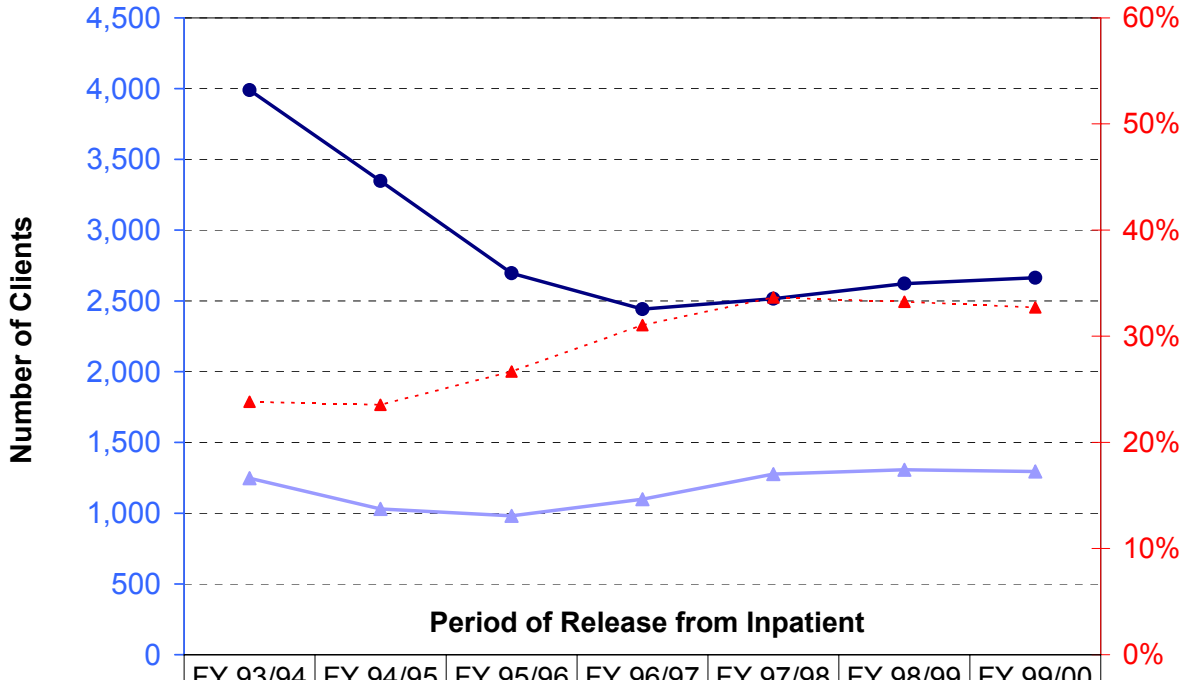
Figure 8
Statewide
Number and Percent of Medi-Cal Mental Health Youth Inpatient Clients who Returned to Inpatient Services Within 180 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	5,295	4,651	3,899	3,709	4,178	4,214	4,354
Returned	1,582	1,439	1,699	2,078	2,457	2,390	2,505
Proportion Returning	23.0%	23.6%	30.4%	35.9%	37.0%	36.2%	36.5%
Total Clients	6,877	6,090	5,598	5,787	6,635	6,604	6,859

Figure 9 shows the number and percent of Youth in CANOLA who returned to Inpatient Services within 180 days. In FY 1993/94, 23.8% of the Youth returned to Inpatient, while in FY 1999/00 there were 32.7% returning within 180 days.

Figure 9
CANOLA
Number and Percent of Medi-Cal Mental Health Youth Inpatient Clients who Returned to Inpatient Services Within 180 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	3,989	3,347	2,696	2,442	2,515	2,623	2,663
Returned	1,248	1,031	981	1,100	1,276	1,307	1,295
Proportion Returning	23.8%	23.5%	26.7%	31.1%	33.7%	33.3%	32.7%
Total Clients	5,237	4,378	3,677	3,542	3,791	3,930	3,958

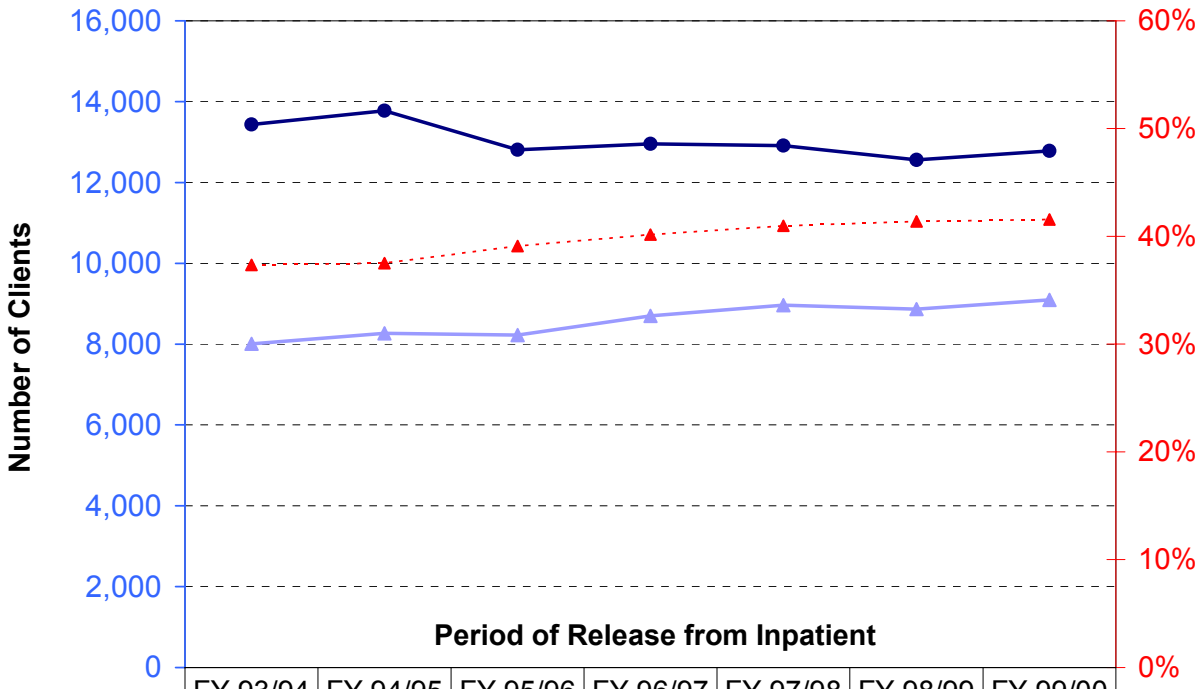
For both the Statewide and the CANOLA data, the proportion of Youth who are rehospitalized within 180 days increases at a higher rate than Adults (See Figure 10). Statewide, there was a 13.5% higher rate of returning in the seven year period. CANOLA data shows an 8.9% higher rate of returning in the seven year period.

Figure 10
Percent of Medi-Cal Mental Health Youth Inpatient Clients Who Returned Within 180 Days By County, CANOLA, and Statewide

	FY 1993/94	FY 1994/95	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99	FY 1999/00
County A	23.1%	20.8%	25.8%	29.9%	51.0%	39.0%	40.1%
County B	18.7%	28.2%	26.9%	29.6%	32.0%	37.4%	24.3%
County C	30.8%	32.0%	45.5%	35.3%	40.7%	41.2%	30.0%
County D	32.7%	20.4%	24.7%	34.1%	20.0%	36.1%	26.0%
County E	27.1%	21.7%	24.5%	27.1%	26.3%	34.5%	36.8%
County F	23.9%	21.8%	25.6%	28.3%	30.0%	30.2%	35.0%
County G	14.6%	23.0%	23.9%	37.2%	35.2%	20.6%	28.4%
County H	30.6%	21.8%	26.2%	18.8%	41.5%	41.2%	36.4%
County I	14.3%	7.7%	37.5%	30.0%	25.0%	9.1%	23.1%
Los Angeles	20.4%	23.8%	37.4%	43.6%	41.5%	40.5%	41.7%
CANOLA	23.8%	23.5%	26.7%	31.1%	33.7%	33.3%	32.7%
Statewide	**23.0%**	**23.6%**	**30.4%**	**35.9%**	**37.0%**	**36.2%**	**36.5%**

Figure 11 shows the number and percent of Adults Statewide who returned to Inpatient Services within 180 days. In FY 1993/94, 37.4% of the Adults returned to Inpatient, while in FY 1999/00 there were 41.6% returning.

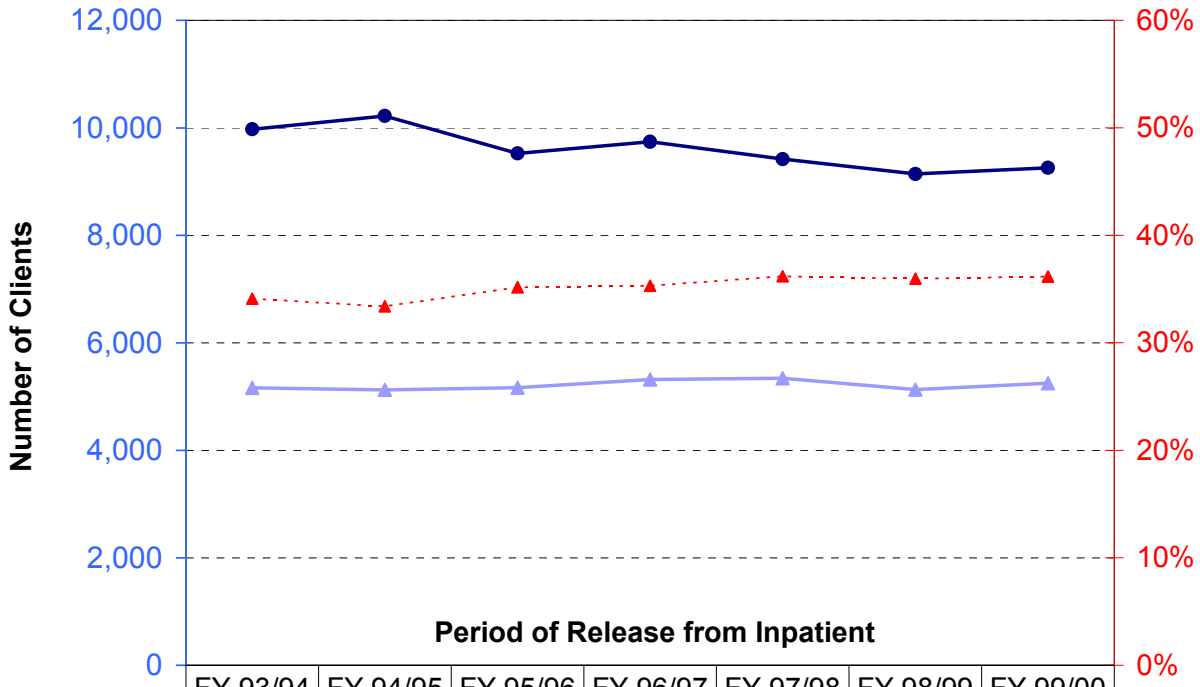
Figure 11
Statewide
Number and Percent of Medi-Cal Mental Health Adult Inpatient Clients who Returned to Inpatient Services Within 180 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	13,432	13,776	12,811	12,956	12,911	12,557	12,783
Returned	8,010	8,267	8,227	8,696	8,963	8,868	9,093
Proportion Returning	37.4%	37.5%	39.1%	40.2%	41.0%	41.4%	41.6%
Total Clients	21,442	22,043	21,038	21,652	21,874	21,425	21,876

Figure 12 shows the number and percent of Adults in CANOLA who returned to Inpatient Services within 180 days. In FY 1993/94, 34.1% of the Adults returned to Inpatient, while in FY 1999/00 there were 36.2% returning.

Figure 12
CANOLA
Number and Percent of Medi-Cal Mental Health Adult Inpatient Clients who Returned to Inpatient Services Within 180 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	9,973	10,224	9,525	9,742	9,418	9,140	9,256
Returned	5,164	5,126	5,165	5,317	5,343	5,131	5,246
Proportion Returning	34.1%	33.4%	35.2%	35.3%	36.2%	36.0%	36.2%
Total Clients	15,137	15,350	14,690	15,059	14,761	14,271	14,502

Figure 13 shows County, CANOLA, and Statewide data for Adult clients who returned within 180 days. Statewide, a higher proportion of Adults returned within 180 days. In FY 1993/94, 37.4% of Adults returned, while in FY 1999/00, 41.6% returned. Compared to Youth, this is a smaller increase across the seven years of the study. For Statewide data, there was a 4.2% higher rate of returning in the seven year period. CANOLA data shows a 2.1% higher rate of returning over the seven years.

Figure 13
Percent of Medi-Cal Mental Health Adult Inpatient Clients Who Returned Within 180 Days By County, CANOLA, and Statewide

	FY 1993/94	FY 1994/95	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99	FY 1999/00
County A	31.2%	33.3%	39.7%	42.3%	41.4%	42.5%	37.0%
County B	36.4%	32.3%	35.7%	33.8%	38.3%	34.2%	33.2%
County C	30.5%	25.9%	25.6%	34.6%	39.1%	35.6%	28.9%
County D	28.0%	29.7%	31.7%	31.2%	37.8%	30.1%	35.3%
County E	36.0%	32.5%	21.9%	24.3%	25.4%	25.8%	29.5%
County F	31.3%	33.2%	35.1%	34.5%	39.8%	41.3%	39.9%
County G	31.7%	32.1%	36.4%	31.8%	35.0%	28.0%	33.4%
County H	0.0%	31.8%	32.1%	38.3%	29.4%	36.8%	35.6%
County I	28.2%	25.6%	25.6%	19.4%	14.3%	11.1%	3.7%
Los Angeles	45.1%	46.9%	48.2%	51.3%	50.9%	52.2%	52.2%
CANOLA	34.1%	33.4%	35.2%	35.3%	36.2%	36.0%	36.2%
Statewide	**37.4%**	**37.5%**	**39.1%**	**40.2%**	**41.0%**	**41.4%**	**41.6%**

In order to interpret the county numbers, several points should be made. Los Angeles County has a higher percent of Youth in the total Medi-Cal Mental Health population, about 40% of clients in both FY 1993/94 and FY 1999/00, than the State as a whole. A similar situation applies to County A. County A is a heavily populated, urban county in the Bay Area. The proportion of Youth Medi-Cal clients who returned within 180 days rose significantly during the study period. In FY 1993/94, County A had 23.1% its Youth return within 180 days, lower than either State figures or CANOLA. By FY 1999/00, the percent of Youth in County A who returned within 180 days climbed to 40.1%.

Figure 14 shows a comparison of how rehospitalization rates changed for FY 1993/94 and FY 1999/00 for Youth and Adults. For both the Statewide and the CANOLA data, the increases in rehospitalization rates for Youth are greater than the increases in rehospitalization rates for adults.

Figure 14
Changes in Rehospitalization Rates for Medi-Cal Mental Health Youth and Adult Inpatient Clients at 0-180 Days After Discharge
FY 1993/94 and FY 1999/00

	Statewide			CANOLA		
	FY 1993/94	**FY 1999/00**	***Percent Change***	**FY 1993/94**	**FY 1999/00**	***Percent Change***
Youth	23%	36.5%	+13.5%	23.8%	32.7%	+8.9%
Adult	37.4%	41.6%	+4.2%	34.1%	36.2%	+2.1%

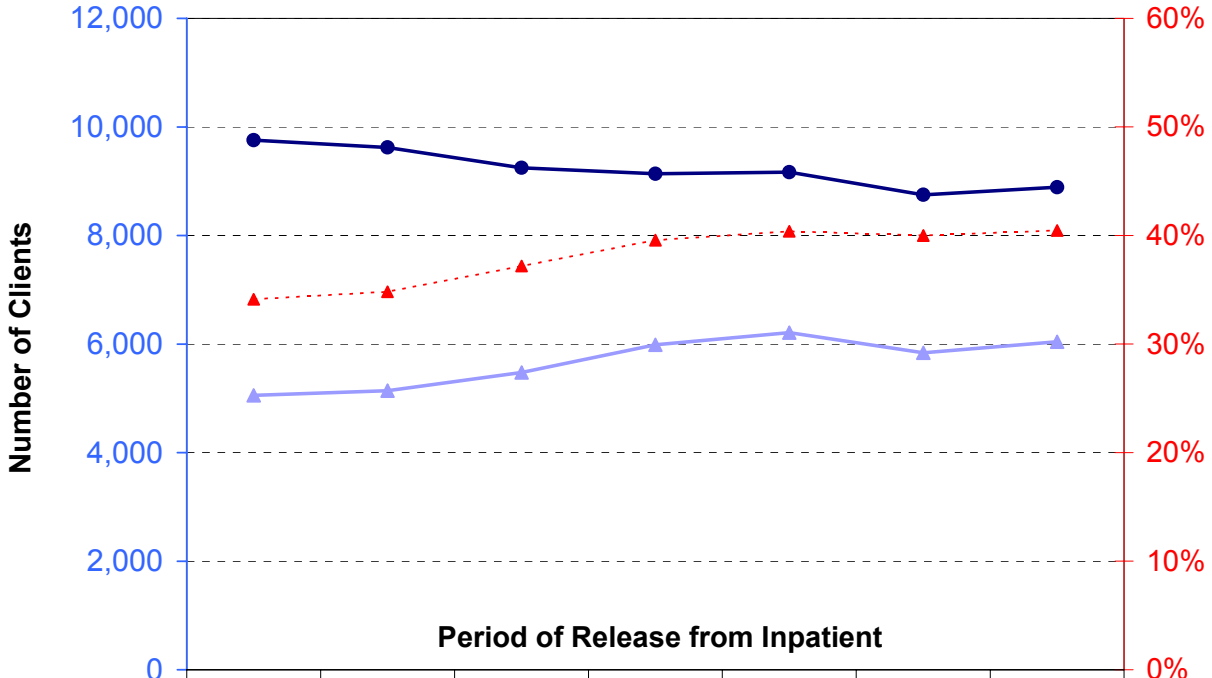
Rehospitalization Rate Trends by Race/Ethnicity

Performance measurement data examined by the State QIC has often shown significant differences between race/ethnicity groups. This fact is also being recognized at the national level. Work Group members felt investigation of rehospitalization rates by race/ethnicity was critical to gain a fuller understanding of how the service delivery system operates. Unfortunately, as mentioned earlier, Medi-Cal claims data is not collected reliably for race/ethnicity. At the present time, two groups are included in this analysis. However, it is important to note again that the SSA data collects only Caucasian, African American, and Other. As a result of this limited data collection, the Caucasian category may include some individuals whose ethnicity is Hispanic. As with Age Groups, the focus of this discussion will be on rehospitalization rates within 0–180 days of Inpatient discharge.

The data on rehospitalization rates for persons who are Caucasian looks very similar to the trends for overall rehospitalization rates. This reflects the predominance of persons who are Caucasian in the population receiving services. In FY 1999/00 persons who are Caucasian represented 48.9% of Medi-Cal mental health clients and 50.7% of Inpatient clients.

Figure 15 shows the rates of rehospitalization for persons who are Caucasian across the State. In FY 1993/94, 34.1% returned within 180 days. By FY 1999/00, 40.5% returned.

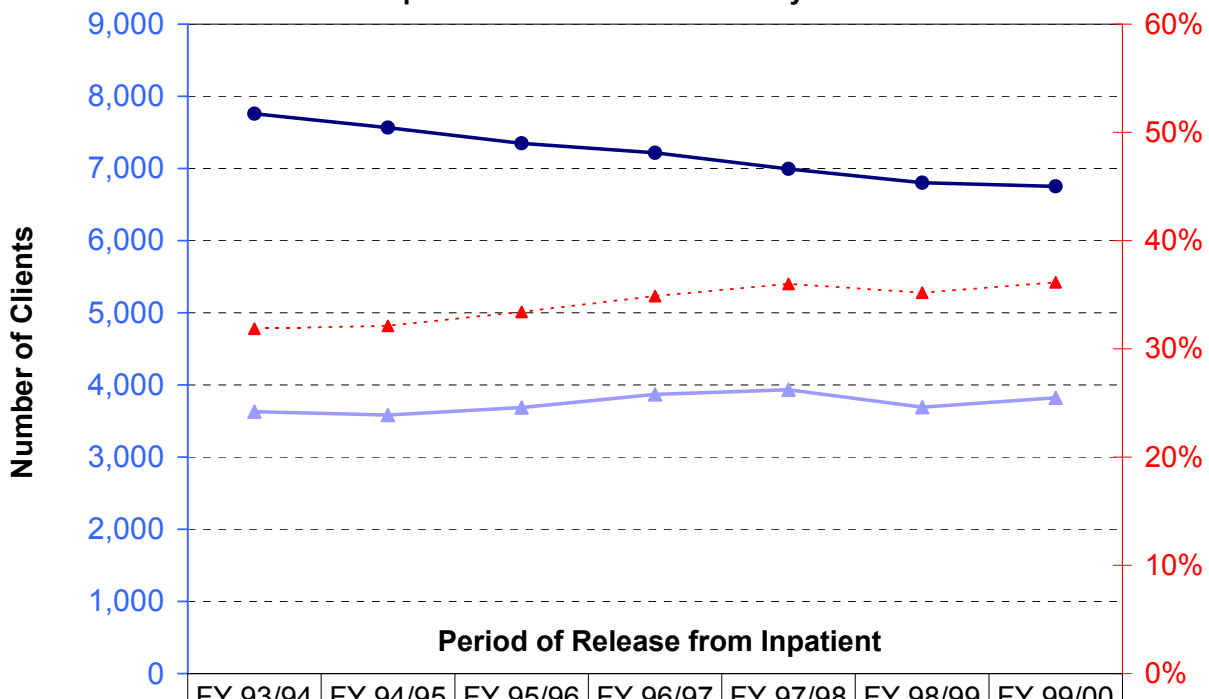
Figure 15
Statewide
Number and Percent of Medi-Cal Mental Health Caucasian Inpatient Clients who Returned to Inpatient Services Within 180 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	9,759	9,622	9,246	9,136	9,168	8,752	8,887
Returned	5,055	5,140	5,475	5,984	6,212	5,837	6,041
Proportion Returning	34.1%	34.8%	37.2%	39.6%	40.4%	40.0%	40.5%
Total Clients	14,814	14,762	14,721	15,120	15,380	14,589	14,928

Figure 16 shows the rates of rehospitalization for persons who are Caucasian for CANOLA. In FY 1993/94, 31.9% returned within 180 days. By FY 1999/00, 36.1% returned.

Figure 16
CANOLA
Number and Percent of Medi-Cal Mental Health Caucasian Inpatient Clients who Returned to Inpatient Services Within 180 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	7,758	7,566	7,349	7,218	6,994	6,801	6,751
Returned	3,629	3,583	3,689	3,868	3,934	3,692	3,823
Proportion Returning	31.9%	32.1%	33.4%	34.9%	36.0%	35.2%	36.2%
Total Clients	11,387	11,149	11,038	11,086	10,928	10,493	10,574

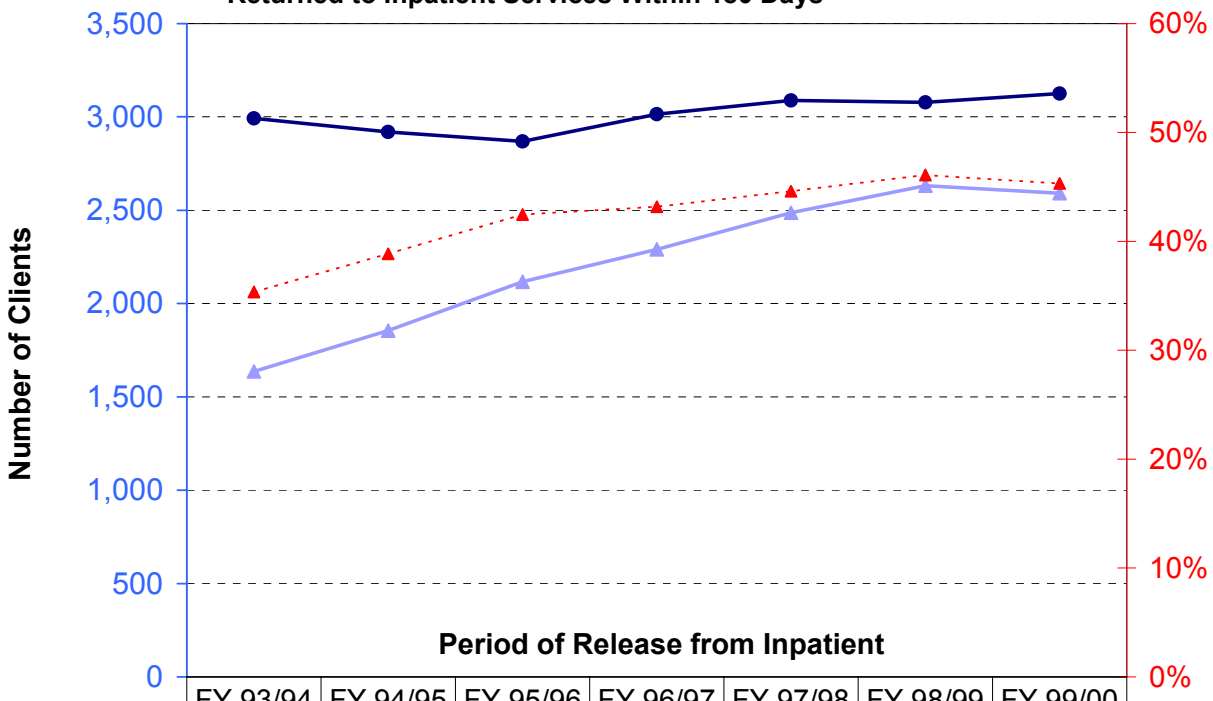
Figure 17 shows the percent of Inpatient clients who are Caucasian who returned within 180 days across the ten target Counties, CANOLA, and Statewide.

Figure 17
Percent of Medi-Cal Mental Health Caucasian Inpatient Clients Who Returned Within 180 Days By County, CANOLA, and Statewide

	FY 1993/94	FY 1994/95	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99	FY 1999/00
County A	29.5%	31.4%	35.5%	40.1%	45.3%	38.6%	35.1%
County B	34.4%	37.9%	37.7%	34.6%	39.8%	43.5%	31.9%
County C	31.9%	28.1%	26.7%	33.8%	40.6%	35.4%	26.4%
County D	31.7%	30.9%	34.5%	33.9%	37.6%	32.6%	38.4%
County E	37.0%	31.2%	22.1%	26.1%	27.5%	30.5%	35.4%
County F	27.4%	31.0%	33.2%	32.8%	36.9%	36.2%	39.4%
County G	30.9%	33.0%	36.3%	33.2%	35.4%	26.0%	35.7%
County H	22.7%	19.3%	31.0%	32.7%	33.3%	42.7%	35.2%
County I	30.2%	17.8%	28.6%	24.3%	21.1%	10.7%	8.1%
Los Angeles	41.6%	43.1%	48.5%	52.5%	51.2%	52.4%	50.9%
CANOLA	31.9%	32.1%	33.4%	34.9%	36.0%	35.2%	36.2%
Statewide	**34.1%**	**34.8%**	**37.2%**	**39.6%**	**40.4%**	**40.0%**	**40.5%**

Figure 18 shows the rates of rehospitalization for persons who are African American across the State. In FY 1993/94, 35.4% returned within 180 days. By FY 1999/00, 45.3% returned.

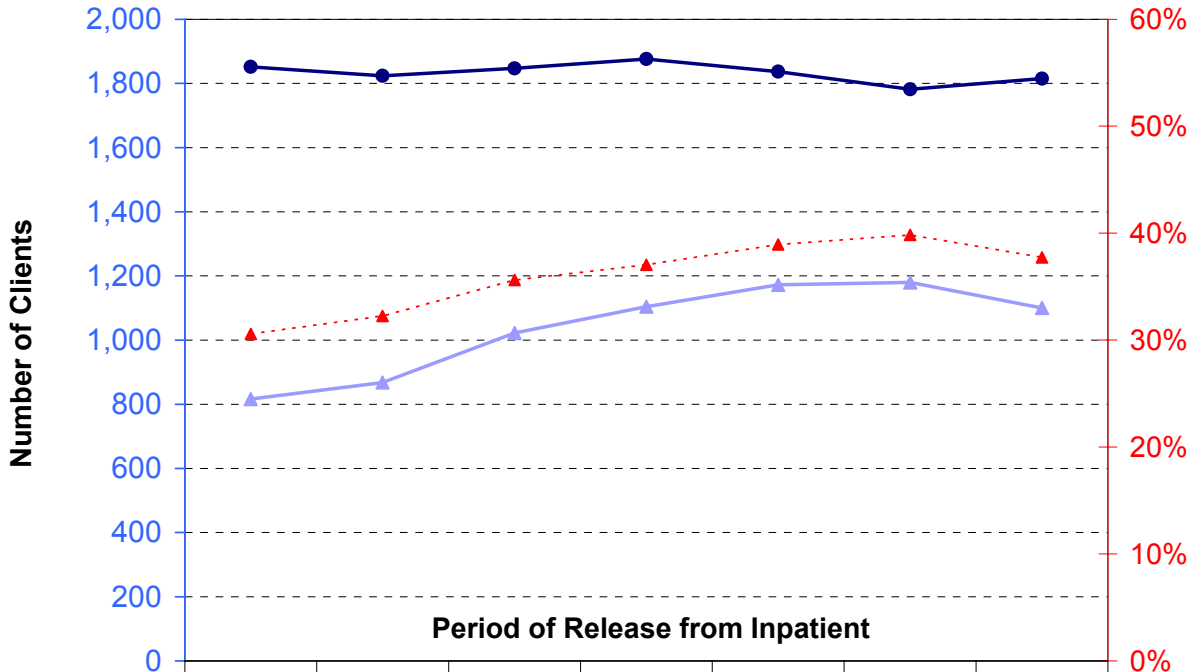
Figure 18
Statewide
Number and Percent of Medi-Cal Mental Health African American Inpatient Clients who Returned to Inpatient Services Within 180 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	2,992	2,920	2,869	3,015	3,089	3,078	3,125
Returned	1,636	1,855	2,117	2,291	2,487	2,632	2,591
Proportion Returning	35.4%	38.8%	42.5%	43.2%	44.6%	46.1%	45.3%
Total Clients	4,628	4,775	4,986	5,306	5,576	5,710	5,716

Figure 19 shows the rates of rehospitalization for persons who are African American across CANOLA. In FY 1993/94, 30.6% returned within 180 days. By FY 1999/00, 37.7% returned.

Figure 19
CANOLA
Number and Percent of African American Inpatient Clients who Returned to Inpatient Services Within 180 Days



	FY 93/94	FY 94/95	FY 95/96	FY 96/97	FY 97/98	FY 98/99	FY 99/00
Did Not Return	1,852	1,824	1,847	1,876	1,837	1,782	1,815
Returned	816	868	1,022	1,104	1,172	1,180	1,100
Proportion Returning	30.6%	32.2%	35.6%	37.0%	38.9%	39.8%	37.7%
Total Clients	2,668	2,692	2,869	2,980	3,009	2,962	2,915

Figure 20 shows the percent of Inpatient clients who are African American who returned within 180 days across the ten counties, CANOLA, and Statewide.

Figure 20
Percent of Medi-Cal Mental Health African American Inpatient Clients
Who Returned Within 180 Days
By County, CANOLA, and Statewide

	FY 1993/94	FY 1994/95	FY 1995/96	FY 1996/97	FY 1997/98	FY 1998/99	FY 1999/00
County A	29.3%	33.8%	40.1%	40.8%	42.9%	45.0%	40.3%
County B	28.4%	32.3%	28.2%	35.0%	44.2%	27.6%	45.1%
County C	0.0%	0.0%	0.0%	40.0%	0.0%	100.0%	0.0%
County D	16.9%	24.5%	29.3%	28.0%	38.0%	34.0%	13.2%
County E	28.8%	30.6%	26.9%	26.3%	28.6%	24.1%	25.0%
County F	31.6%	31.2%	37.3%	31.2%	39.5%	47.5%	39.7%
County G	21.7%	16.1%	16.0%	50.0%	23.4%	34.4%	30.2%
County H	0.0%	0.0%	0.0%	40.0%	0.0%	0.0%	60.0%
County I	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Los Angeles	41.8%	47.4%	51.7%	51.0%	51.2%	52.8%	53.2%
CANOLA	30.6%	32.2%	35.6%	37.0%	38.9%	39.8%	37.7%
Statewide	**35.4%**	**38.8%**	**42.5%**	**43.2%**	**44.6%**	**46.1%**	**45.3%**

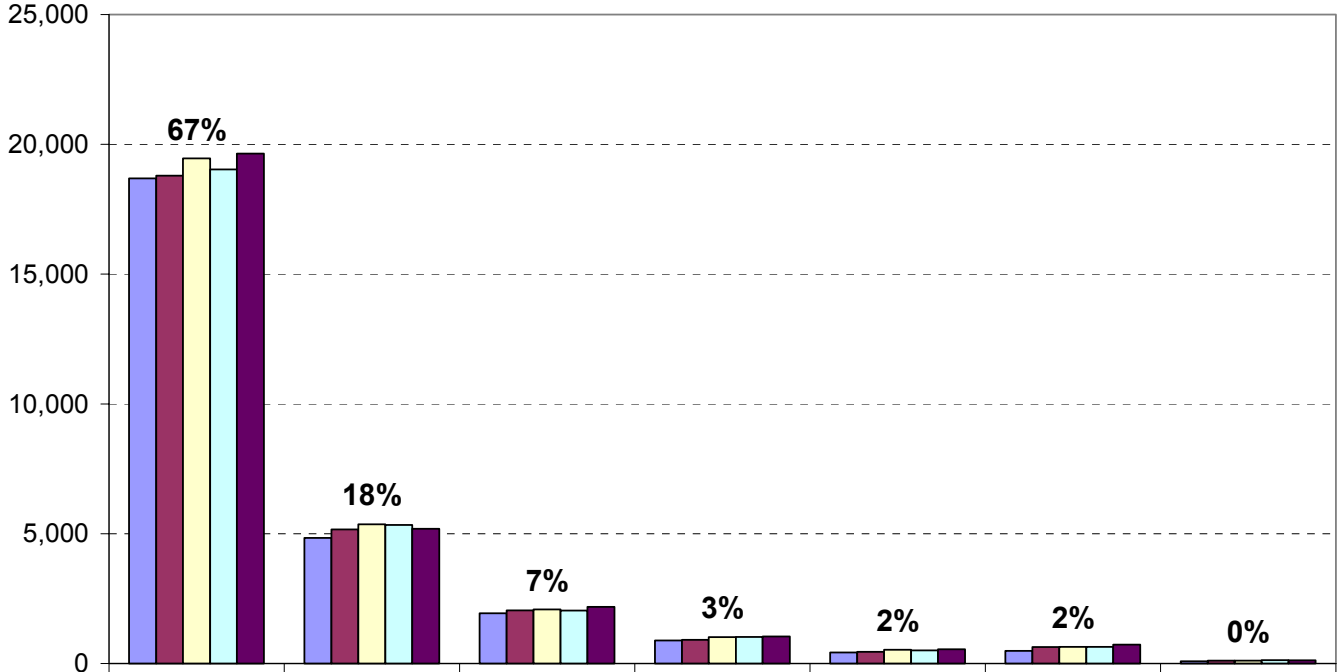
Over the seven-year study period, persons who are African American constituted from 13–16.6% of the Medi-Cal client population and 15.9%-19.4% of the Inpatient Medi-Cal population. The Statewide rehospitalization rate for persons who are Caucasian rose 6.4% during the study period, 4.3% in the CANOLA data. The rehospitalization rate for persons who are African American Statewide rose 9.9% since FY 1993/94. The increase for persons who are African American in CANOLA during that time was 7.1%. Clearly, the rehospitalization rates for persons who are African American have risen more than those for persons who are Caucasian.

The county-specific data reflects the fact that African American client populations are quite small or even non-existent in some counties and quite large in other, more urban counties.

Number of Clients by Number of Admissions

Figure 21 shows the number and percent of clients Statewide by number of admissions in a fiscal year. This information was examined across five years (FY 1995/96 through FY 1999/00). The bars are quite consistent across all fiscal years. The number of clients with eleven or more admissions is of concern because it has increased from 86 to 123 persons between FY 1995/96 and FY 1998/99.

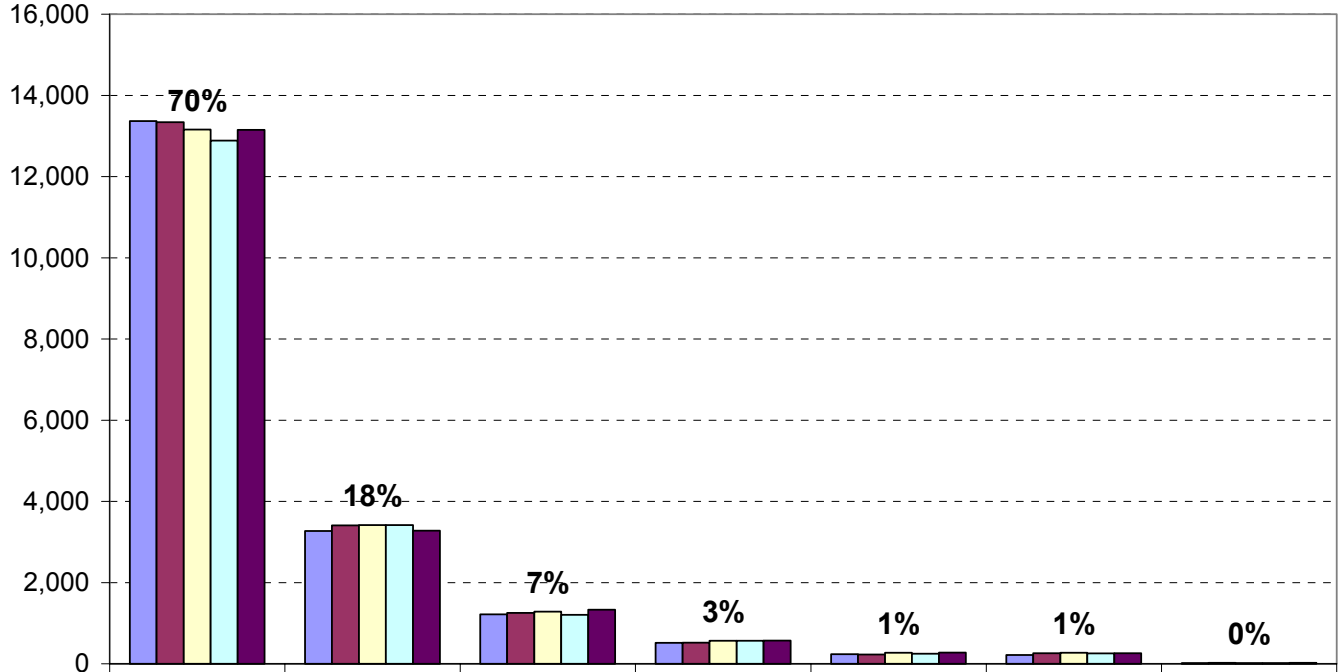
Figure 21
Statewide
Number of Clients by Admission



	1 Admit	2 Admits	3 Admits	4 Admits	5 Admits	6-10 Admits	11+ Admits
FY 95/96	18,687	4,833	1,936	884	427	488	86
FY 96/97	18,797	5,167	2,051	908	455	630	110
FY 97/98	19,466	5,363	2,084	1,012	531	643	113
FY 98/99	19,036	5,339	2,036	1,025	501	644	129
FY 99/00	19,645	5,194	2,175	1,040	551	731	123

Figure 22 shows the same data for CANOLA. The number of clients remained relatively stable across the five years for each of the categories.

Figure 22
CANOLA
Number of Clients by Admission

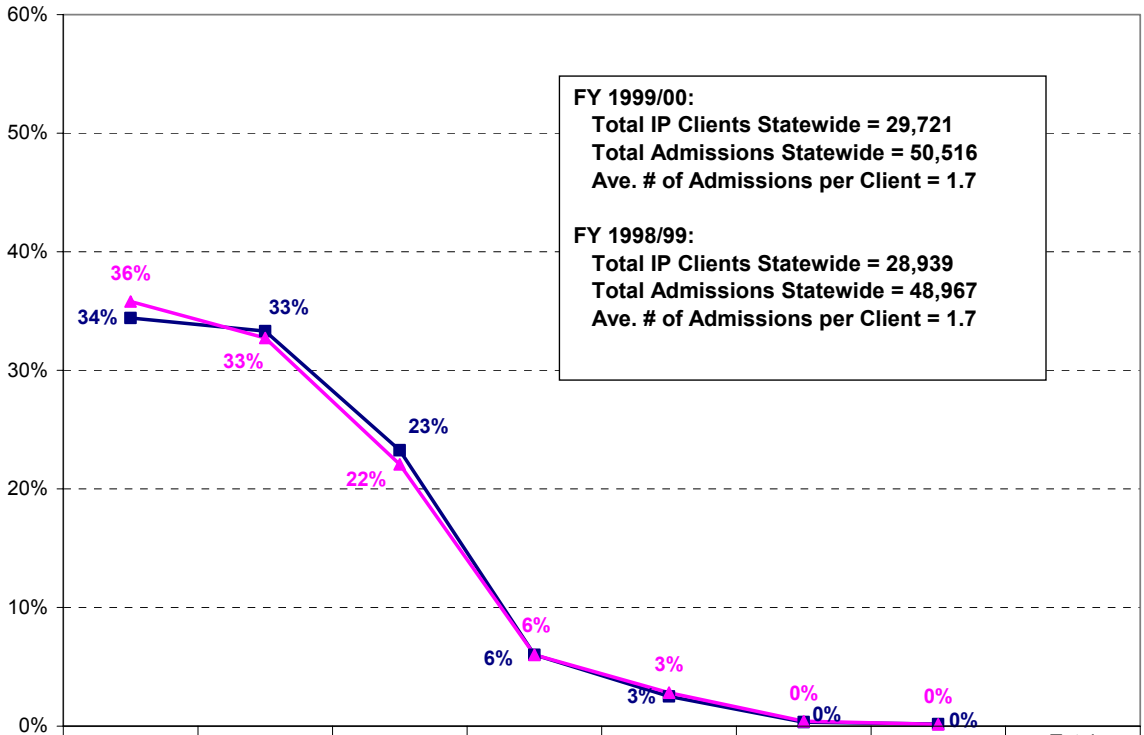


	1 Admit	2 Admits	3 Admits	4 Admits	5 Admits	6-10 Admits	11+ Admits
FY 95-96	13,366	3,271	1,217	516	240	217	17
FY 96-97	13,337	3,411	1,257	520	226	259	23
FY 97-98	13,163	3,416	1,285	566	271	271	14
FY 98-99	12,887	3,414	1,203	564	251	254	19
FY 99-00	13,149	3,277	1,335	573	276	260	22

Average Number of Admissions and Admissions by Length of Stay (LOS)

A recent survey by the National Association of Psychiatric Health Systems noted a reduction in hospital lengths of stay by 60.1% over the past ten years (1990-2000). In view of this national trend, the Work Group examined data on the average length of stay for clients across a two-year period. Figure 23 shows Statewide data for Length of Stay for All Clients in FY 1998/99 and FY 1999/00. This graph shows that 34% of clients had a 1-3 day length of stay in FY 1998/99, 33% had a 4-7 day length of stay and the remaining 33% of the clients had stays longer than 7 days. The numbers are very similar for FY 1999/00.

Figure 23
Statewide
Admissions by Length of Stay for All Clients
FY 1998/99 and 1999/00



	1-3 Days	4-7 Days	8-17 Days	18-30 Days	31-60 Days	61-90 Days	91+ Days	Total Admissions
98/99 Admissions	16,859	16,314	11,388	2,937	1,226	163	80	48,967
% of 98/99 Admissions	34%	33%	23%	6%	3%	0%	0%	100%
99/00 Admissions	18,090	16,534	11,148	3,033	1,427	210	74	50,516
% of 99/00 Admissions	36%	33%	22%	6%	3%	0%	0%	100%

There is a common assumption that shorter lengths of stay will result in increased rehospitalizations. To investigate further, DMH Statistics and Data Analysis staff prepared a regression analysis seeking correlation between these two data elements. No significant relationship was found to exist.

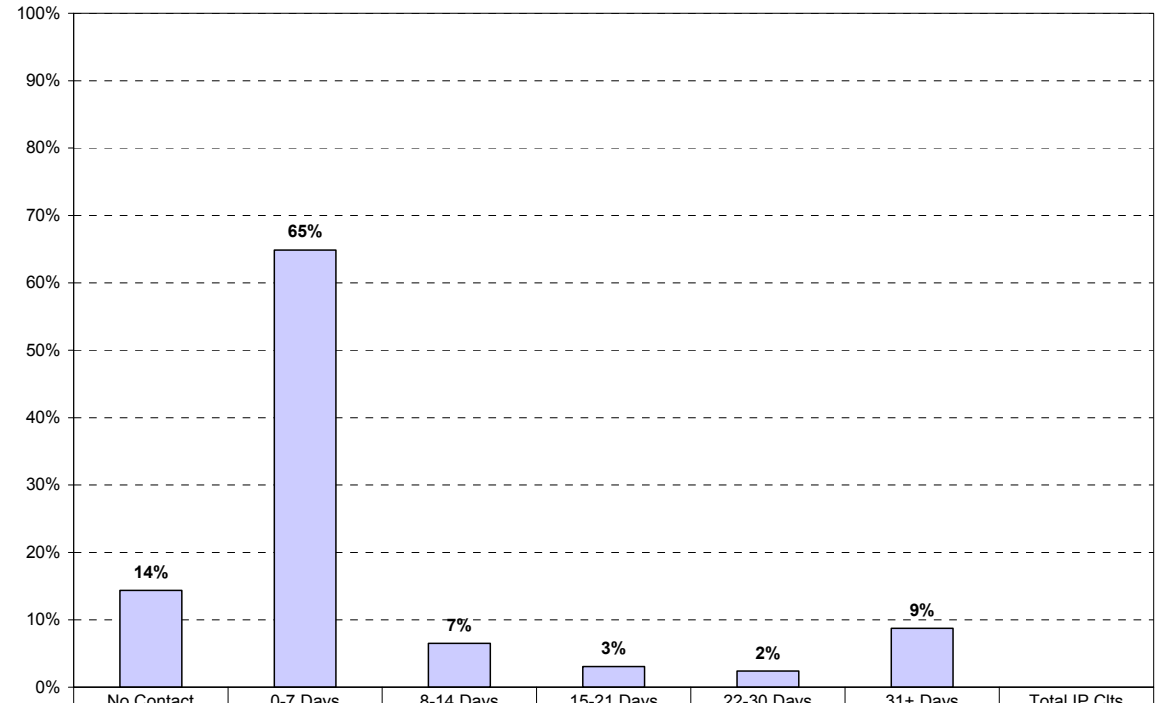
Mental Health Contacts After Inpatient Discharge

The Work Group chose to look at this data element because of a belief, largely supported by the literature, that continuity of care after discharge can be a factor in preventing rehospitalization. Data from FY 1999/00 was examined for a cohort (subset) of clients. This cohort included all clients discharged from Medi-Cal Inpatient Services between July 1 and December 30, 1999. For each client discharged from Inpatient Services, data was examined for a six-month period of time to determine if he/she received a Medi-Cal Mental Health Service. If a service was received, the number of days elapsed to first contact was calculated.

Figure 24 shows the Statewide data for this continuity of care data. A total of 17,071 Inpatient Medi-Cal clients were followed for this data element. Of these clients, 14% had no contact within six months. Some of the clients who did not receive a Medi-Cal service may have received a non-Medi-Cal service (e.g., private physician, non-Medi-Cal provider, or non-Medi-Cal reimbursable service). The data for this study only included information from the Medi-Cal system.

Statewide, 65% of the cohort of clients received their first contact within seven days of hospital discharge. By 14 days after discharge, 72% of clients had received a contact (65% plus 7%).

Figure 24
Statewide
Number and Percent of All Clients Discharged from Inpatient Services (from July to December)
By Days to First Mental Health Contact (within 6 Months of Discharge)
FY 1999/00



	No Contact	0-7 Days	8-14 Days	15-21 Days	22-30 Days	31+ Days	Total IP Clts
Number	2,452	11,077	1,113	527	410	1,492	17,071
Percent	14%	65%	7%	3%	2%	9%	100%

Figure 25 focuses on county-specific data for clients. This table shows the percent of clients who did not received a Medi-Cal Mental Heath Service within six months following Inpatient discharge. The percent of the clients who did not receive a Medi-Cal Mental Health Service in six months ranged from 6% to 23%. This table also shows the percent of clients who did receive a Medi-Cal Mental Health Service, by the number of days to first contact.

Figure 25
Percent of Clients Discharged from Inpatient Services:
Who Did Not Receive a Medi-Cal Mental Health Service within 6 Months
Who Did Receive a Medi-Cal Mental Health Service by Days to First Contact
FY 1999/00
By County, CANOLA, and Statewide

	No Medi-Cal Mental Health Service	% Received Service within 0-7 Days	% Received Service 8-14 Days	% Received Service 15-21 Days	% Received Service 22-30 Days	% Received Service within 31+ Days
County A	15%	58%	8%	3%	2%	13%
County B	6%	78%	4%	2%	3%	7%
County C	23%	47%	10%	3%	7%	10%
County D	8%	84%	3%	2%	1%	3%
County E	16%	59%	5%	3%	4%	13%
County F	16%	61%	9%	3%	3%	8%
County G	18%	58%	9%	4%	2%	8%
County H	12%	46%	19%	9%	6%	8%
County I	8%	76%	0%	0%	4%	12%
Los Angeles	13%	66%	6%	3%	2%	10%
CANOLA	15%	64%	7%	3%	2%	8%
Statewide	**14%**	**65%**	**7%**	**3%**	**2%**	**9%**

Figure 26 shows a cumulative total for the percent of clients Statewide who received a Medi-Cal Mental Health Service within 7 days (65%), 14 days (71%), 21 days (74%), 30 days (77%), and 6 months (86%). This cumulative data is also shown for each County and CANOLA.

Figure 26

Cumulative Total

Percent of Clients Discharged from Inpatient Services:
Who Did Receive a Medi-Cal Mental Health Service by Days to First Contact
FY 1999/00
By County, CANOLA, and Statewide

	% Received Service Within 7 Days	% Received Service Within 14 Days	% Received Service Within 21 Days	% Received Service Within 30 Days	% Received Service within 6 Months
County A	58%	67%	70%	72%	85%
County B	78%	81%	83%	86%	94%
County C	47%	57%	60%	67%	77%
County D	84%	87%	89%	90%	92%
County E	59%	64%	67%	71%	84%
County F	61%	70%	73%	76%	84%
County G	58%	67%	72%	73%	82%
County H	46%	65%	74%	80%	88%
County I	76%	76%	76%	80%	92%
Los Angeles	66%	72%	75%	77%	87%
CANOLA	64%	71%	74%	77%	85%
Statewide	**65%**	**71%**	**74%**	**77%**	**86%**

II. County Interviews

Staff from each county participated in a two-hour interview with members of the Work Group. The interviews were structured around a set of questions that were supplied to county staff ahead of time. Highlighted below are some of the critical issues identified by local staff as a factor in rehospitalization rates. Though not every county mentioned every issue, this list does provide an overview of staff opinions. A more detailed survey would be necessary to elicit quantitative information regarding these issues.

Dual Diagnosis Clients with Mental Health and Substance Abuse (Issue most frequently mentioned)

1. Substance abuse contributes to a high rate of hospitalizations, short lengths of stay, and frequent rates of rehospitalization.

2. Substance abuse is not consistently reported as a co-occurring diagnosis. This creates an underreporting of the influence of substance abuse on hospitalization utilization.

Inpatient Bed Availability and Human Resource Issues

3. There is a critical and ongoing loss in the number of hospital beds available for psychiatric clients (particularly in Northern California and the Bay Area).

4. Some counties are experiencing difficulty in recruiting psychiatrists and medical doctors (MDs) because of the high cost of living. Some regions report that MDs who are new to the area can't afford housing near the hospitals and therefore select positions in other parts of the State and/or County.

5. The shortage of psychiatrists makes it difficult to schedule an appointment. Some clients are being re-hospitalized before they can get an appointment to see the doctor.

6. Some counties can only fill their psychiatric needs through the use of locum tenens (temporary pool of physicians). This creates a loss of continuity in medical care for clients. This is also a very costly staffing option that diverts hospital resources that might otherwise be used for improved staffing or enrichment programs.

7. Some counties note that they have difficulty in hiring community mental health staff. In some cases, this is because personnel budgets are very restricted. In other cases, the labor pool of qualified job seekers is inadequate to meet demand. Either way, there is a shortage of staff that can

deliver services to clients that might help keep them out of the hospital. Caseloads are larger and staff resources are stretched across a larger number of clients.

8. Some counties experienced a hiring freeze during the seven-year period. Positions that were lost during such freezes are taking a long time to re-establish and refill.

Admission Policies

9. Some hospitals no longer admit adults, but serve only children. Some facilities serve only adults and do not admit children.

10. The clients who are now being admitted to Inpatient Services are more likely to have co-occurring medical conditions. There is also a growing number of brain damaged and Organic Brain Syndrome clients in the hospital. These clients tend to have longer lengths of stay since community placements are difficult to find.

11. The number of indigent clients continues to grow. This has an impact on the number of available beds and the ability for counties to pay for placements in lower levels of care in the community.

12. In some counties, all persons seen in the hospital emergency room for psychiatric problems are automatically admitted. This results in higher hospitalization rates.

13. In some counties, mobile psychiatric emergency teams are assertive in finding and admitting clients to Inpatient facilities.

14. In some counties, group homes for youth make referrals directly to hospitals. These youth are admitted though other options may also be available.

15. In some counties, there are more hospital admissions toward the end of the month when clients run out of money. Some clients have learned which behaviors to exhibit to gain admission to the hospital. This provides them with shelter and food when they do not have the resources to obtain these in the community.

16. In some counties, clients on Conservatorships and Temporary Conservatorships are more likely to stay longer in the hospital and have more Administrative Days in the hospital.

17. A county's options with a client can be influenced by the county legal/judicial philosophy to seek/not to seek Temporary Conservatorships.

Discharge Planning/Placement/Residential Options

18. Some counties admit children to the hospital because of a shortage of Level 14 Group Home placements. The availability of lower levels of care influences hospitalization rates.

19. For most counties, there is a shortage of low-cost housing options. This lack of housing impacts both length of stay in the hospital and the rate of rehospitalization.

20. Many counties have lost a large number of board and care beds. As a result, there are fewer placement options in the community. This creates a problem when the client is ready to be discharged from the hospital.

21. There is a high demand for residential alternatives in some counties. The limited number of board and care homes creates a situation where operators have a large number of clients from which to accept residents. As a result, more involved clients may be more difficult to place.

22. Some counties are able to pay a high 'patch' rate to the board and care homes. This makes it difficult for other counties to compete for this limited resource.

23. There is a need for more detoxification beds. This would take some of the pressure off of Inpatient facilities by creating an alternative option for a range of services available to this high-risk population.

24. Clients with medical conditions are harder to discharge because it is more difficult to find them a place to stay in the community.

Medications

25. Some hospitals discharge clients with only three days of medications. However, few mental health systems can provide an appointment with a psychiatrist within three days of discharge. As a result, clients could be without medications for a period of time. This may create a situation where the client is being rehospitalized to receive services and/or access meds.

26. Clients may not understand their prescriptions when leaving the hospital. This increases the likelihood that they may not comply with the medication regime and potentially be less successful in remaining in the community.

DISCUSSION

Summary of Data Review

At the outset, the Work Group considered that rehospitalization per se was not a "bad" thing. Sometimes, an Inpatient placement is the appropriate clinical intervention for a client. However, close examination of rehospitalization rates could help identify areas that present possible quality improvement opportunities.

The major finding of this study is that Statewide there has not been an extraordinary increase in rehospitalizations between FY 1993/94 and FY 1999/00. The Work Group found there had been a gradual increase that was more apparent at 0-180 days after Inpatient discharge than at 0-30 days. Rehospitalization rates for the Los Angeles area demonstrate different trends than the rest of the State.

Rehospitalization rates for Youth are more variable than rates for Adults and further examination of this is warranted. It also appears that rehospitalization trends for persons who are African American are higher than other race/ethnicity groups. Perhaps, the best opportunities for quality improvement are with these two populations (Youth and African American clients) following discharge from the hospital.

Contrary to popular opinion but consistent with the literature, this study found no relationship between shorter lengths of stay and rehospitalizations. In-depth analysis was focused on two fiscal years only. Perhaps additional analysis for all seven fiscal years would yield different results.

In August 2001, the California Institute for Mental Health produced a report entitled, "*Psychiatric Hospital Beds in California: Reduced Numbers Create System Slow-Down and Potential Crisis*." The report documents a continuing loss of psychiatric Inpatient beds and the mental health professionals to staff them.

Data generated for this Inpatient Rehospitalization study found that over 1,400 clients in FY 1999/00 had five or more admissions in a year. Providing intensive services to these clients provides a quality opportunity for the system and also an opportunity to free up these critical Inpatient beds.

The data for mental health contacts after Inpatient discharge are encouraging. Though some individual counties vary, in general 65% of clients discharged from the hospital are seen within seven (7) days. Over 70% of clients are seen within 14 days of discharge. The 14% of clients who receive no contacts in six months represent another opportunity for quality improvement.

Summary of County Interviews

Although county staff comments covered a wide range, most agreed that the following factors influenced rehospitalization rates:

- Clients with dual diagnosis
- Issues with Medications
- Inadequate community alternatives for less restrictive placements
- Lack of low cost housing
- Difficulties getting and retaining qualified staff

Summary of Promising Practices

During the interviews, county staff mentioned a wide variety of promising practices they are utilizing to reduce the rehospitalization of clients. Some of these include:

1. A larger county has found it effective to have a psychiatrist that is devoted full time to coordinating Inpatient Services. Dedicating this individual's time to managing Inpatient Services creates an opportunity to have a single standard of care, more control over admission and discharge practices across hospitals, and develops a systems level perspective to coordinate care between Inpatient and Outpatient Services. This creates a system with fewer hospitalizations, improved continuity of care, and lower rates of rehospitalizations.

2. The development of a Crisis Stabilization program has been found to be effective by several counties. A staff member brings the client into the Crisis Stabilization Unit as an alternative to admission to a psychiatric hospital. These Crisis Stabilization programs are voluntary and generally utilize a short length of stay.

3. In some counties, county case management staff coordinate discharge planning with hospital staff. The case manager works with the hospital treatment team and the county Outpatient treatment staff. The case manager contacts the hospital staff at the time of admission and works closely to develop a discharge plan, arrange residential placements when necessary, and coordinates transportation at the time of discharge. The case manager also works closely with the client and residential care provider in the community to help them understand any new prescriptions, dates for appointments, and resources to call.

4. Some counties have Case Management and Crisis Services located across the street from the hospital. This allows easy access and improved coordination between Inpatient and community mental health services.

5. Prescriptions for medications are coordinated with the amount of time required to schedule an appointment with the Outpatient psychiatrist. Clients receive sufficient medications to last the number of days until they are able to meet with their Outpatient physician.

6. Some counties have an established policy that clients have an appointment with a psychiatrist within seven days of discharge from Inpatient Services.

7. Counties have found Children's System of Care services to be helpful in preventing and reducing hospitalizations and rehospitalizations. System of Care staff work closely with the child/youth and families to build a support network to help keep youth in the home and to intervene quickly in times of crises. Staff work with families to help them understand medication prescriptions and improve medication compliance.

8. Some counties have been proactive in obtaining funding for developing low-cost housing for clients. Creative options for funding supported housing, providing supplemental services to board and care homes, and conducting training for care providers have been developed to expand alternatives.

9. The development of a psychiatric unit in the local jail has been found to be effective in meeting the needs of clients within the jail setting. Mental health staff also work with county sheriff and police departments to encourage them to bring mental health clients to the mental health clinic rather than booking them into the jail. A psychiatric unit or team is also valuable in helping to educate law enforcement and the court system in understanding the needs of mental health clients and developing skills and strategies for problem solving. Working with the jail and court system creates an opportunity to meet client's needs through the mental health system rather than through jails and incarceration.

10. Some counties manage the length of time a client spends in seclusion and restraint by requiring a new order to be written every four hours.

11. The identification of clients with co-occurring mental health and substance abuse issues is encouraged in some counties. Service Teams have a Substance Abuse Specialist who is trained in working with clients with a dual diagnosis. All members of the team utilize a consistent strategy in working with these clients.

12. Some counties are proactive in obtaining benefits for clients. Mental Health programs utilize a Benefit Acquisition Team that visits each Outpatient Clinic weekly. Mental health staff identify clients who may be eligible for benefits and arrange for them to meet with Team members on their scheduled day. This makes the benefits acquisition system user friendly for clients and helps them complete the complicated paperwork in a timely manner. This will become increasingly valuable now that benefits must be renewed every three months.

13. As a model for guiding problem solving, one of the counties noted that clients who are readmitted to the hospital within 30 days indicates an issue with how services are delivered while in the hospital. Clients who are readmitted within 31-180 days indicate an issue within the community mental health system.

14. Many of the study counties have developed proactive community based systems to keep clients out of the hospital. When hospitalization is necessary, most clients receive their first Outpatient mental health appointments within seven days.

RECOMMENDATIONS FOR NEXT STEPS

The Inpatient Rehospitalization Study provided an excellent foundation of information regarding Inpatient Service utilization, rehospitalization trends, and similarities and differences between counties, age groups, race/ethnicity groups, and diagnoses. During the process of identifying, producing, and reviewing the data for this special study, a number of questions for further studies were discussed. The following list provides Work Group recommendations for the next QIC steps for continually improving and understanding our mental health services delivery system.

1. Delve more deeply into possible factors that might be influencing the gradual increase in rehospitalization rates over the last seven years.
2. Monitor bed capacity Statewide and determine the relationship between number of beds, rehospitalization, and community placement.
3. Investigate Youth rehospitalizations in more depth and also consider Youth rehospitalization rates by race/ethnicity. This could be paired with monitoring changes in rehospitalization that might reflect the availability of Therapeutic Behavioral Services.
4. Investigate Inpatient Service utilization of race/ethnicity groups that are not Caucasian, more thoroughly.[5] Use Client Services Information (CSI) data as a new tool in this investigation. Pursue suitable data sources so that services to Older Adults and different race/ethnicity groups can be evaluated (e.g., CSI, Medicare).
5. Identify counties that have developed substance abuse treatment programs as alternatives to placing clients with substance abuse crises into psychiatric Inpatient beds. It would then be possible to compare Inpatient Services utilization in these counties to counties without such alternative programs.
6. Seek promising practices utilizing consumer-run services such as: peer support, drop-in centers and Recovery Education.
7. Seek innovations to engage clients and underserved populations in treatment after Inpatient discharge. This might include promising care delivery models and goals.
8. Study medication prescribing practices to understand impacts on the rate of different prescriptions on rehospitalization rates.
9. Gather information regarding a client's perception of access to services, quality of care, and outcomes.

The Inpatient Treatment Review Work Group recommends the State QIC continue to monitor rehospitalization rates on an annual basis and pursue one or more of the other studies suggested above. The use of information and data is critical to managing valuable resources.

[5] The Inpatient Treatment Review Work Group is presently examining data related to the utilization of Inpatient Services by persons who are African American.

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Inpatient Work Group
Value Statement and Charge Statements

Value Statement

High quality Inpatient services that are culturally sensitive and appropriate for clients and their family members (or significant support persons) are an important component in the continuum of mental health care.

Charge Statements

To review data and indicators and make recommendations related to Inpatient psychiatric hospital services within the context of the continuum of care including, but not limited to: issues of access, utilization and quality.

Specifically, workgroup study and investigation could include but not be limited to the following Inpatient treatment related issues:

Access Issues

- Capacity
- Geographic access
- Children and adolescents (under 18) including foster children
- Dual Diagnosis – mental health/substance and alcohol abuse
- Ethnicity (cultural competence)
- Lanterman-Petris-Short (LPS) status
- Disallowance rates, appeals and denials
- Medical necessity
- Referrals from police, physical health emergency rooms, crisis units and emergency psychiatric services (EPS)

Utilization Issues

- Length of stay
- Admission by default (no other suitable placement)
- Ethnicity – variations among defined groups
- Age
- LPS status
- Disallowance rates, appeals, denials
- Rehospitalization
- Short-Doyle vs. fee-for-service hospitals
- Mental health diagnosis and dementia or other OBS diagnosis
- Special populations: mental health/developmental disabilities, HIV and AIDS/mental health dementia, substance abuse detoxification,
- Psychotic disorders not otherwise specified

Quality of Care Issues

- Use of seclusion and restraints
- History and physical
- Co-morbidity – physical and mental health
- Frequency of visits by medical staff during hospitalization
- Frequency of structured therapeutic activity during hospitalization
- Language and cultural competence of staff
- Client/Family member (caregiver, significant support person) satisfaction survey
- Provider satisfaction survey
- Initiation of discharge planning
- Adherence to standards (HCFA, Medi-Cal and others)
- Days between discharge and first outpatient visit
- Days between Inpatient admission and prior outpatient visit
- Medication
- Quality of life
- Administrative Days

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Special Study Questions

The Workgroup would like to explore the following questions with County staff:

- Do the data seem accurate? If not, what appears to be incorrect?

- Is there key data missing that should be considered?

- Given county-specific data on rehospitalization rates since 1993/94 to 1999/00, to what do you attribute any changes? For example, have any of the following contributed to rehospitalization rates?

  Availability of lower levels of care
  Incidence of co-morbidity
  Housing availability
  Dual diagnosis of substance abuse
  Discharge planning
  Newer medications
  Case management
  Outpatient service array
  System of care services
  IMD beds
  Criminal justice programs
  Availability of Inpatient providers
  Other factors?

- Has your county collected any data on rehospitalization rates? If so, what have you learned?

- Do you have programs or plan to develop programs to track rehospitalization rates in your county?